DOCUMENT RESUME

ED 304 521 CE 051 964

TITLE The Future World of Work: Looking toward the Year 2000.
INSTITUTION United Way of America, Alexandria, Va.
PUB DATE 88
NOTE 75p.
AVAILABLE FROM United Way of America, Sales Service Department, 701 North Fairfax Street, Alexandria, VA 22314 ($15.00 plus $2.50 shipping and handling; charts and graphs available as slides).
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Adults; Delphi Technique; Emerging Occupations; *Employment Patterns; *Employment Projections; *Futures (of Society); *Long Range Planning; Prediction; *Social Change; Social Indicators; *Technological Advancement; Trend Analysis; Values
IDENTIFIERS *United Way

ABSTRACT

This report looks toward the workplace of the year 2000 and describes how current trends could affect United Way programs and operations. To identify trends for the report, the research committee used two futures research methods: the Delphi process and environmental analysis. Using these techniques, the committee identified eight major trends on which this report focuses and four other trends that merit close watching. The eight trends center on personal and family concerns; underused groups; education, training, and retraining; the corporate environment; small businesses; the global marketplace; automation; and employment prospects. The other four trends include Acquired Immune Deficiency Syndrome, related issues, worker privacy, a rising number of the medically indigent, and older workers. Finally, the committee suggests how these trends may affect the future and how United Way may be affected. Appendixes to the report include a resource list and a 20-item bibliography. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED304521

THE FUTURE WORLD OF WORK: LOOKING TOWARD THE YEAR 2000

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

LA Fischman
United Way of America

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CE051964

United Way
of America

United Way Mission:
To increase the organized capacity of people to care for one another.

701 North Fairfax Street
Alexandria, Virginia 22314-9989

Copyright 1988 by United Way of America.
All rights reserved.
Reproduction in whole or in part
is not permitted without written
permission of the copyright holder.

CONTENTS

Foreword v
Preface vii
Trends Summary 1
Implications for Workers and Employers 4
How United Ways May Use This Information 6
Analysis of Trends 11
Trend 1: Personal and Family Concerns 12
Trend 2: Underused Groups 19
Trend 3: Education, Training, and Retraining 22
Trend 4: The Corporate Environment 25
Trend 5: Small Business 29
Trend 6: The Global Marketplace 33
Trend 7: Automation 37
Trend 8: Employment Prospects 43
Trends Worth Watching 48
AIDS 48
Worker Privacy 49
The Medically Indigent 50
Older Workers 51
Afterword 53
Appendices
A. Environmental Scan Committee Roster 60
B. Issues Identification Process 62
C. Additional Resources 68
□ Publications 68
□ Software Packages 68
D. Selected Bibliography 70

FOREWORD

William Aramony
President

The Future World of Work: Looking Toward the Year 2000 is the second United Way of America strategic planning report on the dynamics of the workplace, United Way's key marketplace.

This report updates a 1981 report which, like the present report, was prepared by United Way of America's Environmental Scan Committee. The committee is made up of volunteers—futurists from government, business, labor, medicine, and academia. Together, committee members examined key trends affecting the workplace. What they found is reported here.

To meet the challenge of the Second Century Initiative, United Ways need to continue understanding the shifting dynamics of the workplace and the effect of those changes on our way of doing business. By using reports such as this one to study change and by using strategic planning to manage change, we will be more successful during our Second Century of service to America's communities.

We are particularly grateful to William C. Ashley of Ashley and Associates for his leadership of the Environmental Scan Committee. We are also grateful to the members of the committee (see Appendix A), all of whom have given so generously of their time and talent.

We trust you will find this report useful.

William Aramony

William Aramony
President

PREFACE

William C. Ashley,
Chairman
Environmental Scan
Committee

The Future World of Work: Looking Toward the Year 2000 is the second report alerting United Way volunteers and professionals to changes in the workplace, changes that could significantly affect United Way programs and operations. This second report builds on our most recent national scan—*What Lies Ahead: Looking Toward the '90s*—which was also prepared by the Environmental Scan Committee and was published in 1987. In fact, it was while the members of the committee were compiling *What Lies Ahead* that they decided the rapid changes occurring in the workplace merited a separate, in-depth examination.

To identify trends for *The Future World of Work: Looking Toward the Year 2000*, the committee used two futures research methodologies:the Delphi process and environmental analysis. Using the Delphi process, the committee was able to narrow a list of 43 work-related environmental trends to the eight major trends on which this report focuses (see Appendix B for a detailed explanation of the Delphi process). The committee also recognized four other trends (referred to in this publication as "Trends Worth Watching") that are not as immediately critical to United Way's role in the workplace but that merit close monitoring.

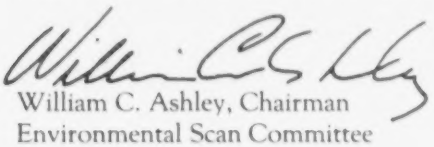
The trends identified through the Delphi process were then researched through United Way of America's environmental analysis program. A unique effort among health and human-services organizations, the environmental analysis program allows United Way of America to monitor continuously five major areas of change—social, economic, political, technological, and philanthropic. It draws on a wide range of sources of information, including books, magazines, journals, television and radio broadcasts, and unpublished research, in order to monitor ongoing trends and detect new developments.

After reviewing the initial draft of this report, the committee felt it necessary to add an Afterword. *The Future World of Work* systematically discusses trends that are readily apparent today, but it does not speculate on how these trends may alter with radical systemic changes in our society. In contributions to the Afterword, two committee members speculate on how the world of work may change should American societal institutions be significantly restructured—a likely possibility according to many futurists.

The Future World of Work: Looking Toward the Year 2000 is not intended, nor should it be taken, as a concrete forecast of the workplace of the future. Rather, the committee hopes it will provide United Ways and other organizations with an examination of possible workplace changes and speculation on how such changes may affect their future.

Our committee is grateful for the work provided by staff members of United Way of America. Special thanks are extended to Linda Forbes, consultant, Strategic Planning and Markets; Lu Anne Fischman and Susan Kuhn, who staff the Environmental Analysis department; and Dr. George Wilkinson, vice president, Strategic Planning and Markets, who has managed the environmental scan effort since 1980. We also acknowledge Sandi Peyton, Elissa Soares, and Mandi Sheer for the many hours they spent on the typing of this report; their fine work is very much appreciated. Thanks are extended as well to Don Phelps, campaign associate, United Way of Santa Clara, who also worked on this publication.

Those of us who created *The Future World of Work* invite your comments, opinions, and suggestions. We have enclosed a postcard for this purpose, and we welcome your response.



William C. Ashley, Chairman
Environmental Scan Committee

TRENDS SUMMARY

Personal and family issues are increasingly affecting the workplace.

- ☐ The number of working mothers will continue to rise.
- ☐ The number of dependent elderly will increase.
- ☐ Time pressures—arising from the attempt to balance work and family demands—will continue to mount in the lives of Americans.
- ☐ Work-related illnesses, such as stress, will increase in frequency and will continue to affect worker productivity.
- ☐ Workplace cost of substance abuse—in terms of lost productivity and employment—will continue to be a problem.
- ☐ Cigarette smoking outside of one's home will be increasingly limited.
- ☐ Worker demand for more flexible benefits packages will continue.
- ☐ Growing numbers of corporations will implement employee assistance programs (EAPs).

There will be greater employment opportunities for the previously "underused" segments of the population—specifically, women, minorities, and the disabled.

- ☐ The growth of the U.S. work force will slow.
- ☐ The work force will continue to grow increasingly diverse both racially and ethnically.
- ☐ Most new workers will be women.
- ☐ The percentage of mothers who work outside the home will continue to rise.
- ☐ Hispanics will experience the fastest labor force growth among minority populations.
- ☐ Immigrants will comprise an increasingly greater share of the U.S. population and the work force.
- ☐ Employment opportunities for Americans with disabilities will continue to increase as the U.S. shifts to a service economy and increasingly uses technological advances.

Worker education, training, and retraining will be crucial to meeting the challenge of a rapidly changing, technologically advanced economy.

- ☐ Workers will change jobs and occupations at a faster rate than ever before.
- ☐ Jobs will require workers to be even better educated and more highly skilled.
- ☐ Colleges and universities—as well as corporate education and training programs—will increasingly need to provide remedial studies classes.
- ☐ The U.S. education system will need to focus less on producing greater numbers of high-school graduates and focus more on producing graduates of higher caliber.
- ☐ Critical teacher shortages will continue, especially in areas such as bilingual education, special education, math, and science.
- ☐ Technology will change many of today's familiar jobs, necessitating retraining or additional worker education.
- ☐ The U.S. will face a shortage of skilled workers by the year 2000.
- ☐ The number of young adults available to enter the work force will decrease because of the baby bust that began in 1965.
- ☐ Fewer individuals will have the skills needed for the jobs available in the coming years.
- ☐ The corporate education system will continue to grow due to greater corporate involvement and increasing enrollment.
- ☐ A community's commitment to training and education increasingly will affect a corporation's decision as to where to relocate.
- ☐ Functional illiteracy in the U.S. will continue to be a serious problem.
- ☐ The number of technologically illiterate Americans is likely to rise.

Corporate restructuring will continue to alter the business landscape and employment conditions in the 1990s.

- ☐ Corporate merger and acquisition activity will slow in late 1988, but remain at historically high levels into the 1990s.
- ☐ Corporate profits will be healthy in the late 1980s.

- Foreign purchase of U.S. stocks, particularly by Japanese investors, will increase.
- Corporations will acquire other business units primarily to support their core business, rather than for purely financial reasons.
- America's manufacturing sector will continue to rebound, showing gains in volume of sales and number of employees.
- America's service sector will grow more slowly in the 1990s. Advertising, accounting, broadcasting, financial services, airlines, and communications fields may suffer layoffs.
- Cities which are regional financial centers are likely to experience slow growth.
- The mid-'80s notion that the U.S. was becoming a "bicoastal economy" will be reversed in the late '80s because of stronger growth rates in the midwestern manufacturing states and weaker growth rates in coastal, service-intensive states.
- New businesses will provide an increasing share of reemployment for laid-off workers.
- Part-time and temporary employment and employee-leasing arrangements will employ a growing percentage of the work force.
- Changes in work schedules and benefits packages are blurring the distinctions between full-time and part-time jobs.
- The public sector may have to assume the burden of inadequate pension and health-insurance coverage of part-time and temporary workers.

The growth of small firms will continue to alter traditional employment patterns and ways of doing business.

- Small businesses will create nearly all of the new jobs available.
- The entrepreneurial spirit will remain alive, particularly among educated young adults.
- Women will continue to start small businesses in great number.
- The boom in small business is likely to add to wage disparity as small-business owners generally make a higher salary and employees make a lower salary than in large corporations.
- Small-business employees will continue to experience unstable employment and financial security as businesses fail or falter.

The globalization of the international economy increasingly will influence American business and philanthropy.

- The American economy will grow more unstable as it becomes more interdependent with the economies of other nations.
- Rapid population growth in underdeveloped countries will increase the labor supply in low-wage nations.
- New technologies will allow for greater "portability"—of work, workplaces, and workers.
- Global telephone and computer capability will make instantaneous international communication increasingly possible.
- Foreign investment in the U.S. will remain strong.
- American corporations will continue to move work out of the U.S.
- More U.S. corporations will do business overseas.
- The corporation will increasingly operate according to what is best for the corporation itself, rather than what is best for the community or country in which the corporation is operating.

Automation, computerization, and robotization will spread faster through the workplace, changing both the nature of work and what one needs to succeed in the marketplace.

- Computers will be used more extensively in the workplace.
- Greater numbers of businesses and individuals will have access to computer networks.
- The cost of communications will continue to decline.
- Technology will make some jobs and occupations obsolete.
- More workers will work in their homes full- or part-time.

The rapidly changing economy will create an unstable employment picture for many workers.

- The service sector will continue to add the most new jobs.
- Employment opportunities in the professions, as well as technical, managerial, sales, and service jobs, will far outstrip opportunities in other fields.

- Manufacturing's share of employment will remain stable, although the number of manufacturing jobs will increase.
- The number of self-employed farmers will decline.
- State and local government will experience some employment growth; employment at the federal level will remain stable.
- Workers will continue to be displaced.
- Real wages will continue to decline, likely causing an increase in the proportion of persons holding second jobs.
- Americans will continue to work longer hours.
- The emerging hard core of nonworking Americans is signaling that unemployment will likely remain a problem in America.

More workplaces will be affected by AIDS.

- The number of AIDS cases will continue to rise sharply.
- The emergence of AIDS-related issues, such as the right to privacy, discrimination, and the rights of noninfected employees, will increasingly affect the work world.
- Workplace policies regarding treatment of people with AIDS will become more common.

Concern will rise over worker-privacy issues.

- The number of lawsuits alleging violations of worker privacy will continue to rise.
- Businesses will increasingly use technological advances to monitor worker productivity and worker health.
- Genetic screening by employers—to determine whether an employee or potential employee is susceptible to illness—is likely to rise.

The number of Americans with no health insurance will continue to increase.

- The number of Americans with inadequate health-care coverage will also continue to rise.
- The number of employers providing medical benefits for employees will continue to decline.
- Employers will continue to shift medical costs onto the employee.
- The increased use of technology and genetic testing will likely cause insurers to deny coverage for "at-risk" workers, possibly increasing the ranks of the nation's uninsured.

The number of Americans who want to continue to work after age 65 will likely rise.

- Life expectancy will continue to rise.
- Fewer workers will opt for early retirement.
- Businesses will increasingly recruit older workers as the pool of young people declines.
- Businesses will increasingly employ older workers on a temporary basis.

IMPLICATIONS FOR WORKERS AND EMPLOYERS

□ In order to maintain a productive work force, employers will have to be increasingly sensitive and responsive to workers' personal and family concerns. They will need to institute policies and programs that reduce stress and respond to symptoms of stress, as well as policies that enable workers to meet family obligations.

□ Employers that do not have employee assistance programs in place will feel growing pressure to provide such programs.

□ Demand will grow for "cafeteria-style" employee-benefits plans that offer employees many benefit options to meet varying personal circumstances. Employers will find themselves under increasing pressure to devise flexible and equitable solutions to employee-benefits needs.

□ Public pressure for employers to respond to the need for adequate child care will increase. As the work force becomes almost half female, the need for child-care options will grow, and employees will expect businesses to help devise responses to this need.

□ As the proportion of elderly Americans grows, business will play a significant role in helping the nation devise solutions to problems such as long-term care for the dependent elderly and medical-care costs that may bankrupt elderly people.

□ Employers increasingly will be challenged to respond to the attitudes, values, and needs of a diverse work force that includes growing numbers of women, minorities, immigrants, and individuals with disabilities.

□ In order to spend more time with their children, women in the work force will increasingly press not only for employer-sponsored child-care programs but also for options such as parental leave, more part-time jobs, flexible hours, and stay-at-home jobs.

□ For women, pay-equity issues will persist. Women will also continue to push for higher-level positions in organizations.

□ Equal opportunity issues will persist for minorities, as minority individuals seek to work their way up in the organizational hierarchy.

□ Growing numbers of employers will need to offer educational programs for employees—programs that provide both remedial and higher-level skills.

□ The business, public, and voluntary sectors will discover they must work together to resolve the national crisis in educational performance. Businesses will continue to support public and private educational programs but will seek evidence more frequently that these programs are producing desirable results. Businesses will also be pressured to give better support to the nation's junior and community colleges. Currently, these institutions receive less than 1 percent of corporate support, yet they are deeply engaged in training and retraining the nation's work force.

□ Corporate restructuring will continue to have an impact on communities. Businesses that are restructuring and other community organizations will need to work together to help people who are left unemployed after mergers and acquisitions, downsizing, technology-induced layoffs, plant closings, and relocations. Firms that are leaving communities may be inclined to ignore these human-service needs.

□ Small businesses, especially those that become well established, increasingly will be called upon to support vital community services. Small businesses will recognize that their own interests depend upon the viability of local human services and that they must find ways to support those services. The availability of human services is extremely important to the employees of small businesses, because such businesses often pay low wages and offer incomplete benefits packages.

□ Foreign ownership of companies located in America will increase. Currently, foreign ownership is relatively limited—constituting only 2 to 3 percent of U.S. industry. Foreign owners will be expected to support the American philanthropic tradition. More foreign-owned businesses will be asked to follow the example of some Japanese corporations that have undertaken significant initiatives in philanthropic contributions and support of community human services.

□ Employers will realize in greater numbers that they must assess and prepare for the impact of new technology on their organizations. They will need to evaluate potential worker displacement and the need for employee retraining.

□ As leaders in applications of computer technology, businesses increasingly will be called upon to support and help the voluntary sector. As nonprofits come to recognize the tremendous potential that computer technology has for addressing human problems, they will ask businesses to provide both technologically proficient volunteers and in-kind contributions of computer-related equipment.

□ As the service sector continues to grow, employers as well as the rest of the nation will face the economic limitations of the low-paid end of the service work force. Lower-paid service workers will be limited not only in their consumer purchasing power but also in their ability to pay for needed human services. Some observers, in fact, feel that the United States is developing a two-tier work force: on one tier are highly paid managerial workers; on the other tier, low-paid workers in jobs requiring limited skills.

□ All indications are that AIDS will have a growing impact on the workplace. Employers will be faced with the loss of workers and rising insurance costs. They will also have to confront issues related to discrimination, the right to privacy, and rights of noninfected employees. A proactive stance, including adoption of an AIDS policy, will be the best course of action for employers.

□ Workers will continue to defend their right to privacy at work. This will become an increasingly visible issue as employees resist drug testing, genetic screening, and employer electronic surveillance.

□ Employers will discover that they need to work with the voluntary and public sectors to respond to the problem of the medically uninsured in this nation. Businesses will recognize that it is in their own best interest to provide leadership in developing comprehensive public or private health-insurance programs. They will recognize that children—the nation's future workers—are among those suffering from lack of adequate medical care (because their parents cannot pay for it).

□ Older workers increasingly will choose to remain in their jobs and will seek challenging, meaningful work. This may create problems for younger workers who seek to move up in an organization.

HOW UNITED WAYS MAY USE THIS INFORMATION

United Ways can use the information contained in this report in a variety of ways. For example, they can:

- Design, develop, and support programs to help workers reduce stress. (Examples are recreational and counseling programs that help workers manage demands on their time and accept limitations on what they can accomplish.)

- Support programs that address alcohol and drug abuse, smoking, and the need to care for children and the elderly. Make these programs accessible to workers through labor union counseling and other programs, including information and referral programs.

- Recognize and respond to the requirements of United Way employees for policies and programs flexible enough—or offering enough options in coverage—to meet varying family and personal needs.

- Understand that, in the future, inadequate retirement programs may create tremendous demands on the voluntary sector, as growing numbers of elderly find it difficult to pay for housing, medical care, and other services.

- Provide United Way staff with training in time management and in priority setting.

- Join with business, government, and others in the voluntary sector to address the public-policy issues surrounding the current inadequacy of child-care and elder-care programs in the nation. These public-policy issues also relate to long-term care of the elderly and medical-care costs.

- Recognize and allow for time pressures on United Way volunteers. This may mean structuring new, less time-intensive roles for volunteers, or changing the hours of meetings and other activities to better suit volunteer needs.

- Design, develop, and support programs that help women find and remain in suitable jobs. Women who are the heads of single-parent families will need skills that earn more than a minimum wage. United Ways should consider supporting programs that offer training, placement, and advocacy services for female workers.

- Design, develop, and support community programs that provide employment-related services to minorities, immigrants, and the disabled. For immigrants, these include programs explaining American culture and giving training in English. For the disabled, these include programs on the application of new technologies in the workplace—technologies that for the first time are increasing the employment opportunities of many disabled individuals. United Ways may wish to address these needs through community coalitions.

- Understand the values of new entrants into the work force, such as women, minorities, immigrants, and the disabled, and respond to the needs and interests of these groups in workplace fund raising and in volunteer recruitment and development.

- Examine United Way and its supported agencies from the perspective of inclusiveness. Adopt remedial action when deficits are noted.

- Join with the business and public sectors in seeking ways to support the community's educational programs. Community problem-solving roles for United Way might include research, coalition building, or participation in public-policy debate. Programs that combat illiteracy are among those that United Ways might examine for direct support.

- Plan for the possibility that corporate expenditures on education and training may increasingly deplete funds available for the support of health and human services.

- Support programs that recruit and use retiree volunteers for teaching and training.

- Work with other organizations in the community to design, develop, and support programs for dislocated workers and their families and programs for retirees. For workers displaced by corporate restructuring and business closings, needed services include counseling, support groups, interim food and shelter, job training, and volunteer positions that provide work experience that may later be used in paid employment.

□ Learn as early as possible about potential corporate restructuring in the community, in order to respond proactively. This requires following the business press closely and using informal information networks within the business community.

□ Identify businesses that are experiencing economic downturns and plan the United Way fund-raising campaign accordingly, to anticipate potential changes in employee and corporate support. Look to stronger companies for core support. Also, explore ways of broadening the fund-raising base, including high-net-worth giving, in-kind giving, and giving by small-business owners and professionals.

□ Press the case for continued responsibility to the community among business owners before their businesses are restructured. Many companies will fulfill financial commitments that have been made before a merger or acquisition. One is to tie the company's contribution to human-service programs that will help their employees who are affected by restructuring.

□ Understand the corporate culture and giving patterns of new business owners before contacting them. Develop a cultivation and welcoming program for new CEOs to acquaint them with United Way and community services.

□ Keep already-active managerial talent, which may be laid off or retired from a restructured company, active in United Way. Some of these individuals may start up their own companies or take on other prominent positions in the community.

□ Involve small-business owners in United Way leadership positions in order to gain greater insight into their perspectives on community needs and their ideas on how best to approach small businesses for charitable contributions. Small businesses are also a good place to look for women volunteer leaders.

□ Cultivate small-business owners by finding out their human-service needs and pointing out the importance of community human services for their own employees—especially in light of the limited benefits programs provided by many small businesses. In fund raising, understand that the lower pay of many service employees is a limiting factor. Carefully target those small businesses that are most likely to be interested in United Way.

□ Make available to both owners and employees a means of community involvement through voluntarism. Recognize that many small business owners, as entrepreneurs, may present some new values and attitudes. Although they may not share the "corporate citizenship" philosophy of business people in older firms, small business owners' approaches to social and community issues may be dynamic and innovative. If harnessed, this entrepreneurial energy may prove tremendously beneficial to United Way.

□ Explore new approaches for delivering services to workers in small businesses. To reach these workers, United Ways may have to set up agency fairs in office parks and malls, work through business trade associations, provide information and referral through computer networks, or use videotapes to introduce information about services.

□ Recognize that the growth of small businesses applies to the voluntary as well as to the for-profit sector. United Ways will have to respond more frequently to the small, emergent, entrepreneurial human-service agency. There will be more diversity in human services, as more specialized small agencies form.

□ Prepare for possible conflict between human-service agencies and small for-profit businesses that are providing the same or similar services, such as fitness programs or home health care.

☐ Contact new foreign owners as soon as they acquire community businesses, and educate them about United Way and the American philanthropic tradition. Acquire a good understanding of the national culture of these new owners. Draw parallels, when possible, with philanthropy in their own countries. Point out the benefits that support of community human services will bring to the company, in terms of community goodwill.

☐ Work with human-service agencies to explore the potential application of technology to human-service problems. This includes development of information banks for agency referral, job placement, and other specialized needs, as well as the use of expert systems in counseling, educating, and training.

☐ Promote the sharing of computer resources and expertise among human-service agencies. Encourage networking around issues of computerization and automation.

☐ Use electronic fund transfers, when possible, to receive contributions from self-employed donors such as doctors, lawyers, accountants, and others.

☐ Develop a long-range plan for automating United Way functions, including the use of computers for processing information related to campaign accounts, agency budgets and allocations, market research, financial accounts, and so forth. Include in the plan provision for training United Way staff in the use of computers.

☐ Explore with other groups in the community the use of communications networks in community problem solving. Networks can link community groups together for fast, nonhierarchical decision making. Advocacy groups may organize through communications networks when face-to-face meetings are not possible.

☐ Work with other community groups to design, develop, and support programs that match people with the education and training they need to survive in a changing work world. This includes programs to help underemployed, unemployed, and displaced workers. It also includes programs to provide volunteer opportunities to workers who cannot find suitable jobs but want to remain active. For these workers, volunteer opportunities may be a vital and important link to the workplace.

☐ Monitor and plan for United Way's own changing employment needs. Consider that, as work-force growth slows and skill requirements increase, some agencies may be hit by labor shortages. For example, the declining availability of registered nurses may hurt Visiting Nurse Associations.

☐ Recognize the severity of the AIDS crisis as a national issue. Assess the extent of the problem in the community, and develop a policy position on United Way's appropriate and reasonable response to AIDS, given the needs of the community. Play a part in promoting public discussion and development of policy alternatives. Link community agencies interested in the AIDS issue with the best available information and with one another.

☐ Consider the impact of issues of workplace privacy on United Way and the agencies it supports. Develop a policy related to these issues, including the issue of privacy in connection with United Way campaign contributions.

☐ Work with other community organizations to address the needs of the medically indigent. Respond to this issue at the public-policy level. Design, develop, and support programs that respond to the immediate needs of those who are financially devastated by illness—those not qualifying for Medicaid yet earning too little to be able to pay for health care.

☐ Explore the impact of older workers in the work force—their impact on United Way contributions and voluntarism, on worker human-service needs, and on United Way itself, as its own workers choose to remain employed at more advanced ages.

□ United Ways can greatly enhance their planning programs by reviewing workplace and work force information for their own communities. This information is available from local libraries, colleges and universities, chambers of commerce, banks and other businesses, and government at all levels. For statistical profiles of community businesses, including the size of the work force in various industries, United Way of America's *Market Place* software may be helpful (see Appendix C for ordering information).

ANALYSIS OF TRENDS

TREND 1: PERSONAL AND FAMILY CONCERNS

Personal and family issues are increasingly affecting the workplace.

The personal problems and concerns of American workers are increasingly spilling over into the workplace. Foremost among these is the need of workers—especially women—to care for dependents, be they children or elderly relatives. But problems with dependent care, and the time crunch that often results, is just one of many issues that can arise. Health-related problems, such as stress-related illnesses, depression, or alcohol and drug dependency, can also evolve as a result of trying to balance the competing demands of home and work. And American workers are increasingly concerned about physical problems which may come about due to the environment of the workplace itself—such as the physical effects of allowing cigarette smoking at work.

Such personal problems and concerns are increasingly becoming factors in employee productivity. As a result, the number of firms with employee assistance programs (EAPs) is on the rise. However, many firms lack the initiative or the resources to put such a program in place. *Personnel Journal* reported in July 1988 that an employer without an EAP can expect to lose 25 percent of the productivity of workers with personal problems severe enough to affect performance. One in five workers has such problems.

Another way American business is coping with employee concerns is through the offering of new employee-benefits plans. The new plans usually package a range of options, allowing an employee to choose only those benefits that would provide the most personal benefit. However, many of these new plans also shift more of the cost onto the employee. This, as well as the fact that more employers are expected to scale back retirement benefits, signals that American workers are likely to be increasingly vulnerable to inflation.

The nation's work force is growing at a slowing rate, pushing the age of American workers ever higher and resulting in the likelihood that more American workers are members of family households—many with young and/or elderly dependents. This is due to the aging of the general population, to the maturation of the huge baby boom generation, and to the "coming of working age" of the much smaller baby bust generation. In addition, for the remainder of the century, the majority of new workers will be women, many of whom will be in their prime childbearing years. All of these factors necessitate analysis of the problems and concerns that American workers are bringing into the workplace more than ever before.

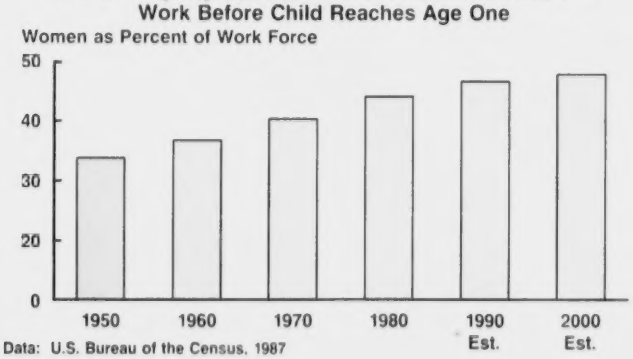
Dependent Care

Less than 10 percent of American families today fit the traditional family stereotype (working husband, housewife, two children). Most families now consist of either dual-income couples (with or without children) or single-parent families. New stresses have arisen for many families: many parents, for example, now find themselves with the responsibility of caring both for their children and for elderly relatives at the same time. (Such parents are referred to as the "sandwich generation.") The combination of new family structure, new stresses, and greater work force participation by women—including more working parents—is creating a crisis in the workplace. Americans feeling the effects of this crisis the most are generally thought to be the scores of working mothers.

The nation has witnessed a dramatic rise in the percentage of mothers who are working. Currently, almost half of all mothers with infants less than one year of age are in the work force—an increase of close to 20 percent in the past ten years. Projections indicate that "almost half" will become "more than half" in the year 1990.

More Working Women Will Increase the Demand for Child Care Benefits

Eighty Percent of Working Women Will Be in Prime Childbearing Years... Majority Will Have Children and Will Return to Work Before Child Reaches Age One



Data: U.S. Bureau of the Census, 1987

For parents who are working, child-care arrangements strongly influence job performance, affecting productivity as much as relationships with supervisors and even job security. In fact, problems with child care are the most significant contributor to employee absenteeism and unproductive time at work. And the stress of balancing work and family responsibilities is the heaviest contributor to depression among employees, regardless of gender.

Despite all these considerations, few employers provide child care for employees' children. Only 2 percent of the American work sites that employ ten or more people—only 25,000 of the nation's 1.25 million workplaces—actually sponsor day-care centers for their employees' children. A greater number of employers—35,000, or 3 percent—provide some amount of financial assistance to employees for day care. Six percent of American workplaces offer referral services for family counseling. The greatest number of employers—61 percent—have schedule policies in place (such as flexible or part-time hours, flexible leave, work-at-home arrangements) that make it easier for employees to care for their children.

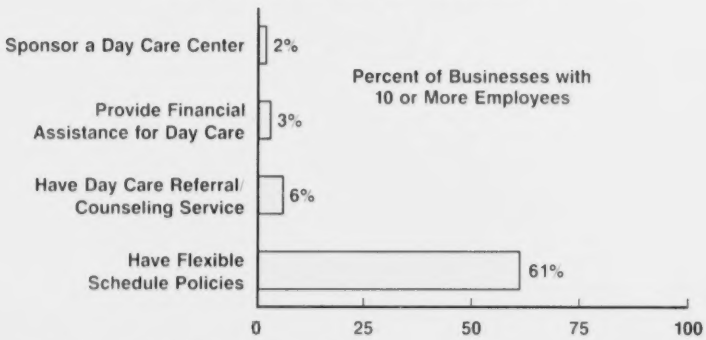
Government agencies are more likely to provide some form of day-care aid than are private firms; and large businesses (those employing 250 workers or more) are more likely than smaller businesses.

There are signs that companies now recognize employee child-care needs as a "business issue"—one that will require innovative solutions if companies are to remain competitive in the marketplace and are to be able to recruit and retain good employees. A July 1988 survey by the Business Roundtable found that more than half of 74 leading firms *plan* to do something to support employees' child-care needs in the next two years, and an additional 27 percent are *thinking* about doing something to support them.

Companies are also discovering a valuable pool of potential workers that could be readily tapped if the burden of child-care needs on employees were eased. Recent surveys reveal that the high price of quality child care is keeping many women from working. More than one-fourth of at-home mothers of preschoolers say they would work if they could find child care at a reasonable price—a potential addition of 1.7 million women to the work force. And 13 percent of employed women with preschoolers (about 700,000 workers) say they would work more hours if better child care were available.

Business Responds to Employee Child Care Needs

Few Provide Financial Assistance



Source: U.S. Bureau of Labor Statistics, 1987

The demand by employees for child-care assistance is often accompanied by a demand for parental leave. About one-third of the nation's largest corporations offer parental leave for child care to both men and women. And many large corporations pay women all or part of their salaries while they are on maternity leave. The majority of working women, however, are employed in smaller firms that generally do not offer these benefits and do not guarantee job security. Overall, maternity leave is handled in various ways, depending upon the state, the employer, and the particular job.

The issues of parental-leave policies and child-care provision or assistance will become even more critical as this century comes to a close. Two-thirds of the nation's new workers during the remainder of the century will be women, and about 80 percent of working women will be in their childbearing years. Eighty to 90 percent of those women will become pregnant during their working life. Most will return to their jobs within six months after giving birth, yet 60 percent of them will have no pregnancy-related benefits. The combination of these factors and the unevenness and limitations of today's policies and benefits packages will probably generate greater employee demand for action—be it through government regulation or new policy-making decisions by American corporations.

Increasingly, day care is needed not only for infants and children but for elderly relatives. In fact, estimates suggest that on the average a woman is likely to devote more years to helping an elderly relative than to caring for a dependent child. The problem of elder care will probably become even more persistent as the U.S. population as a whole grows older and as the number of younger adults available to provide care for elderly dependents declines.

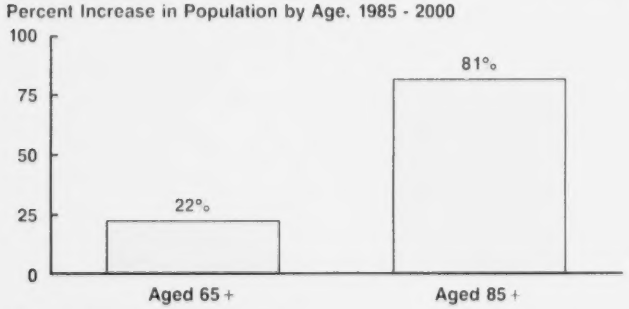
Already some 6.6 million people over age 65 need some form of assistance from others, and the number is expected to reach 9 million by the year 2000. Further, it is expected that the number of Americans aged 85 and older (who generally require the most long-term care) will increase 81 percent between 1985 and the year 2000.

Those who serve as care givers to elderly dependents must perform a wide array of services, such as shopping, cooking, managing paperwork, running errands, providing transportation to doctors' offices, making telephone calls, and keeping house. And many care givers must tackle these numerous chores at the end of—or perhaps during—the work day.

Between one-third and one-quarter of all people over age 40—and one-fourth of all the nation's workers—are currently care givers for an aging relative, and these numbers will increase as the elderly population increases. Employed care givers spend an average of 12 hours per week in care giving, and nearly 10 percent of employed care givers spend more than 35 hours each week in care giving.

Most Rapid Population Growth Among Oldest Americans 1985 - 2000

Need for Elder Care Services to Increase



Data: U.S. Bureau of the Census, 1987

Women shoulder most of the responsibility for caring for the elderly and these women are more likely than ever before to be in the work force. Among all care givers, 75 percent are women—and 72 percent are adult daughters, 44 percent of whom are employed outside the home. Because of the strain of providing such care, however, many women find they must cut their work hours, take early retirement, or simply quit their regular jobs. According to recent studies, 14 percent of wives, nearly 12 percent of daughters, and 5 percent of sons have resigned from their jobs to become full-time care givers. The majority of women care givers forced to quit their jobs are concentrated at the lower end of the economic scale. Increasingly, however, employers are likely to lose experienced managers because older, female managers compose about one-third of working care givers.

Employees who continue to combine work and caring for an elderly person may do so at the risk of their own personal health and well-being. Furthermore, their careers may suffer, since employed care givers tend to avoid job-related travel and overtime and must frequently compromise their career goals.

Employers who manage to retain care givers confront costly problems such as lost work time and impaired performance caused by employees' tardiness, absenteeism, lack of concentration, and frequency of personal phone calls. Since 1985, approximately 100 U.S. companies have responded by introducing some kind of elder-care benefit.

Most employers are limiting their elder-care benefits to the least expensive option: linking up their employees with available services. (However, services needed to keep the growing numbers of aged out of institutions are often unavailable.) Some corporations have begun to offer more extensive elder-care benefits, ranging from elder-care aid (for example, workers receive a pretax deduction of up to $5,000 annually to pay for the cared-for elderly dependents), to partial funding of a community-based "respite" program that gives employees a break from care-giving duties on evenings and weekends, to a policy affording a six-month leave of absence to employees caring for elderly relatives (or children).

Political pressure on Congress to pass an insurance program covering different types of long-term care is certain to increase in coming years. As the baby boomers enter middle age, they are beginning to face the prospect of caring for their aging parents—even as they are still raising their own children. Burdened by their double duty, they are likely to demand the elder-care benefits that could make their lives more manageable.

Time Crunch

Time pressures affect how people behave as families, how they spend money, how they feel physically, and how well they perform at work. Today, the majority of Americans are in a race against time. A May 1987 poll by *USA Today* revealed that more than one-half of American adults say they feel "hurried." According to the poll, those who feel most hurried are individuals aged 25 to 55, two-income couples (who now make up 56 percent of American marriages), and couples (whether with one income or two) making $35,000 or more a year. Yet, six out of ten survey respondents say they would rather have too much to do than too little.

Despite the development of time-saving devices, six of ten Americans maintain that life is more hectic now than five years ago. A common sentiment seems to be, "The more efficient we try to make our lives, the more speed at which we fill in our day, and the less time we have for ourselves."

Between 1973 and 1987, U.S. workers added 6.2 hours to their work week (work encompassing both paid employment and household tasks), putting in an average 46.8 hours in 1987. Meanwhile, the leisure time of these workers declined 7.7 hours per week to 16.6 hours.

Stress

Although people seem to be more health conscious these days, pressured lifestyles may counteract all efforts to eat right and keep fit. Young women, in particular, admit to feeling stressed, as do many dual-career couples (with or without children). (For some dual-career couples, competing with each other is actually a source of stress; often the wives had planned to be part of a dual-career marriage, but the husbands had not.)

The pressure of combining work and dependent care, and the hectic schedule that usually results, is a major contributor to stress. But a person's job may also have much to do with the amount of stress he or she is experiencing. According to a nationwide survey done in mid-1986, 78 percent of all Americans say their jobs cause them stress, with more than half claiming that their lives have become more stressful during the past ten years. In fact, more and more working Americans are blaming job stress for emotional problems: in 1980 stress claims represented only 4.7 percent of occupational-disease cases, but the percentage more than doubled during the subsequent three years and is rising steadily.

Studies show that office stress can increase employee absenteeism, affect employees' levels of concentration, decrease employees' productivity, and lead to health problems such as chronic colds and heart disease. The cost to business of stress-related problems and mental illness is estimated to be $150 billion annually—in health insurance claims, disability claims, lost productivity, and other expenses. More than 90 percent of the 500 largest companies—up from 65 percent in 1985—have launched some form of employee assistance or wellness program designed to promote employees' health and help them manage stress. Yet the stigma of "buckling under stress" is still great enough to deter many workers with serious problems from seeking help at work or on their own—until a crisis forces them to act.

Experts on work-stress believe that the rising incidence of mental stress at work reflects the changing nature of U.S. business. The "computer age" is taking its toll on workers in the form of "techno-stress"—psychological pressure stemming from the mental strain and boredom of using computers and other technologically advanced equipment.

Stress at work may also reflect the effects of economic turbulence—global competition, mergers, acquisitions, and worker layoffs. American workers have seen their careers derailed, are fearful of losing their jobs, feel overworked, have less and less leisure time, and feel their career opportunities are limited. Work conditions such as these are now the rule, not the exception. The result is greater stress.

Substance Abuse

Substance abuse, which exacts a terrible cost from its victims and their families, causes society and business to pay a high price as well. American businesses annually lose over $100 billion in reduced productivity and lost employment related to substance abuse. The cost of lost productivity tied to alcohol abuse is twice that of lost productivity tied to illicit drug use.

Over 18 million adults in the United States are problem drinkers (they consume 14 or more drinks per week), and two-thirds (12.1 million) have symptoms of alcoholism—a record number, and an increase of more than 8 percent since 1980. Of the 18 million problem drinkers, one-third are women, mostly young adults (aged 18 to 34) who work outside the home. Projections show that between now and 1995 the number of male and female alcoholics will rise among those aged 35 and older.

Alcoholism is affecting a growing number of young people. Nearly five million adolescents, or three in every ten, have drinking problems. And several studies have shown that children are beginning to drink earlier than ever before. Of grave concern is the link recently found between drug addiction and alcoholism in a family. The probability of becoming chemically dependent is 400 times greater for children of an alcoholic parent than for someone without a family history of alcoholism.

Alcohol abuse accounts for more family troubles than does anything else. A 1987 Gallup poll found that one family in four has been troubled by alcohol abuse—the highest incidence of problem drinking in 35 years. In 1974, the equivalent figure was only one in every eight families.

Alcohol is not the only substance being abused. Illegal drug use in America also continues to rise, fueled by growing supplies and persistent demand. Cocaine is the biggest problem: consumption has doubled since 1982, with some 5.8 million Americans now using cocaine monthly. An estimated 500,000 Americans are heroin addicts. Approximately 18 million Americans use marijuana at least once a month, although the number who admit to having tried it at least once is much higher.

Drug screening is now becoming standard among U.S. government agencies. And a 1988 University of Maryland survey of America's Fortune 1,000 companies found that substance-abuse testing in the private sector is on the rise. Forty-nine percent of United States firms now test employees or job applicants for drugs (up from 30 percent in 1985). Twenty-five percent of these companies also test for the presence of alcohol in the blood (up from approximately 9 percent in 1985).

Employee Assistance Programs

Many American businesses are establishing employee assistance programs (EAPs) to help employees recover from their chemical addictions and deal with other types of personal and family problems—including stress management, personal financial management, and family counseling.

Corporate EAPs take many forms. Some are simple referral services that direct employees to public or private agencies that can help them. Others are full-service programs that aid workers through detoxification, confidential counseling, behavior modification, and related programs. Many EAPs also include preventive programs that use seminars and in-house publications designed to prevent substance abuse.

More than 10,000 U.S. companies now have EAPs. Most have been established since 1984. In large part, the growth of EAPs is a reflection of the soaring number of companies facing on-the-job problems with substance abuse. A recent study by a Milwaukee-based consulting firm showed that 95 percent of organizations responding to a survey reported they had direct experience with employee substance abuse—twice as many as the number 10 years ago, and three times as many as the number 15 years ago. Still, although about 80 percent of Fortune 500 companies have EAPs, the bulk of American workers are employed by small and medium-sized companies—companies that generally do not have these programs. In actuality, only about 25 percent of the nation's work force currently has access to an EAP.

Cigarette Smoking

Americans' cigarette smoking rates have been declining since the 1960s, when the adverse health effects of smoking were first widely reported. Currently, only about 27 percent of Americans smoke, and of those, almost 90 percent want to quit. With evidence continuing to mount that cigarette smoking is hazardous to health, growing numbers of workers are pressing for a smokeless workplace.

Throughout the 1980s, smoking has evolved into a social issue, rather than simply a personal one. As a result, smoking outside the privacy of one's home is being increasingly limited, although the restrictions vary widely. Forty-one states now restrict smoking in public places; 14 forbid it in offices and other workplaces. The U.S. government now restricts smoking among its employees, and more and more corporations are following suit. According to a 1987 survey by the Bureau of National Affairs and the American Society for Personnel Administration, 54 percent of firms now have some sort of smoking policy (up from 36 percent in 1986), and 51 percent of those ban smoking in open work areas.

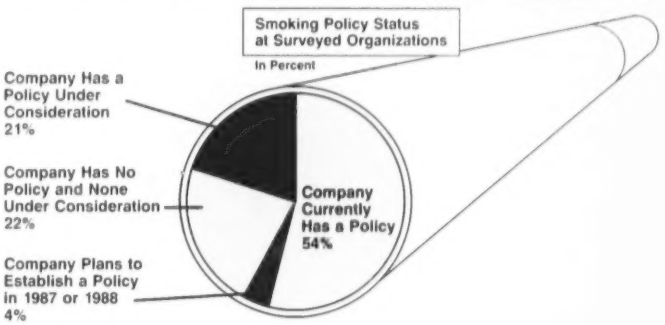
More and more companies that have imposed restrictions on smoking are also attempting to help their employees kick the habit by sponsoring programs and workshops on how to stop smoking.

Among the major reasons for the institution of "no smoking" policies are company concerns about employee health, employee complaints, and state or local law. Both employers and employees can expect to benefit from a smoke-less office. The American Lung Association claims 80 million work days are lost annually to smoke-related ailments. Absenteeism is more than a third higher for smokers, insurance rates are higher for smokers than for nonsmokers, and smokers are fired up to three times as often as nonsmokers. These factors, combined with worker's compensation claims and the possibility of future liability lawsuits from employees or smokers themselves, are causing corporations to consider establishing antismoking policies at the workplace.

Employee Benefits

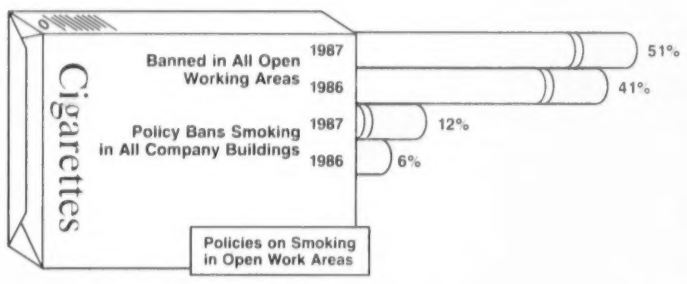
The entry into the workplace of family and personal concerns is a major contributor to the changes transpiring in employee-benefits packages. Many companies already are beginning to switch from old-fashioned, rigid benefits packages to cafeteria-style plans more in line with employee needs. With the new plans, employees can pick and choose from among a number of options. However, the total amount of benefits will probably not rise very fast. And many flexible benefits plans shift more costs onto employees, who thus become more vulnerable to inflation. Nonetheless, two-earner couples are likely to benefit. For instance, instead of both having medical coverage, one could opt for day-care benefits, additional vacation, legal services, or extra life insurance.

Changes in Smoking Policies


Smoking Policy Status at Surveyed Organizations
In Percent
Company Has a Policy Under Consideration 21%
Company Has No Policy and None Under Consideration 22%
Company Plans to Establish a Policy in 1987 or 1988 4%
Company Currently Has a Policy 54%

Data: Bureau of National Affairs, 1987
Source: The Washington Post, December 9, 1987

Changes in Smoking Policies



Data: Bureau of National Affairs, 1987
Source: The Washington Post, December 9, 1987

17

At the same time that many working Americans are requesting changes in benefits packages, many are also questioning the long-term viability of the nation's social security system and private pension plans. Apprehension will mount as the baby boom generation matures and the number of Americans working to support the pensions of their parents' generation continues to decline.

Questions about social security have been well publicized. The U.S. social security system is financed largely out of payroll deductions and a federal contribution. Long-term problems will arise as the ratio of workers to beneficiaries drops. To maintain the system, the federal government will have to reduce benefits or increase payroll deductions.

Less well publicized is the uncertain state of many private pension plans. According to the Institute for Alternative Futures, many companies have underfunded pension plans that were established through collective bargaining or are otherwise provided by the employer. Still other pension plans are casualties of corporate restructuring and financial mismanagement. The recent growth in individual retirement accounts will provide many future retirees a buffer against potential shortfalls from pension plans (or the social security system). However, many Americans will be without such security.

Pressure for decisive action will no doubt arise from the growing number of retirees. Joining them will be baby boomers who realize that if the growing social security surplus is spent to reduce the deficit or fund other programs, they may get relatively little from their decades of contributing to social security. Employers are not likely to fill the gap. In fact, they are expected to scale back retirement benefits.

TREND 2: UNDERUSED GROUPS

Employment of previously "underused" segments of the population—specifically women, minorities, immigrants, and individuals with disabilities—will continue to grow.

As this century comes to a close, relatively fewer people will be entering the work force. In fact, during the next 12 years the work force will be growing at a slower annual rate than it has at any time since the Great Depression. More than two-thirds of the people who will be working in the year 2000 are already working today, which means that the number of new workers will show only a small net increase. That slow growth of the work force will probably provide a "window of opportunity" for the "underused" segments of the U.S. population: women, minorities, immigrants, and people with disabilities.

Although few in number, the new workers will be more ethnically and racially diverse than the current work force. And minorities and females will make up over 90 percent of labor force growth. White males, thought of only a generation ago as the mainstays of the work force, will constitute only 9 percent of new workers through the year 2000.

Women

Almost two out of three new workers (64 percent) will be women during the remainder of the century. This represents almost the same share of labor force growth as women accounted for between 1976 and 1986. By the year 2000, 61 percent of all women of working age are expected to have jobs, up from 51.5 percent in 1980. As a result, women will constitute a greater share of the work force (47 percent) in the year 2000 than they did in 1980 (42.5 percent).

Even in the year 2000, however, women are expected to remain concentrated in "women's work"—jobs performed primarily (90 percent) by women and generally paying far less than comparable men's jobs. But at the same time, women will be rapidly entering many traditionally male professional and technical occupations, particularly those that require advanced education and that pay more. Women's power in the business world will also continue to grow, as more women (than men) launch their own businesses and as more women gain work experience. By the turn of the century, women will represent about 30 percent of top executives, compared with 10 percent today. This will probably mean that, with time, women will be better able to compete for business positions of power and leadership.

The flood of women entering the work force during the last three decades has been driven by powerful social and economic forces. Nevertheless, by the year 2000 the rate at which women enter the work force is expected to slow.

Most New Workers Will Be Non-White, Female or Immigrant

Source: The Numbers News, August 1987

Majority of New Workers Will Be Female

Source: The Numbers News, August 1987

Minorities

Of new workers between now and the year 2000, almost three out of every five (57 percent) will be minorities. As a result, minorities will constitute an increasingly larger share of the nation's work force throughout the remainder of the century. By the year 2000, fully 26 percent of the labor force will be minority, up from 20.5 percent in 1986.

Hispanics are projected to experience the fastest labor force growth of all minority groups—accounting for nearly 29 percent of total labor force growth. (Hispanics, most of whom are white, are sustaining the labor force growth of the white population. Among whites who are not Hispanic, the share of labor force growth is actually projected to drop.) Over 14 million workers in the year 2000 will be Hispanic, up from 8.1 million in 1986. This represents an increase of 74 percent—the largest increase projected for any group. The annual growth rate of the Hispanic labor force over the remainder of the century is also the highest among the population groups, 4.1 percent. Hispanics are expected to account for 10 percent of the labor force by 2000, an increase of 7 percent since 1986.

The share of the Hispanic labor force could differ dramatically from the projections, however. Currently, the Bureau of Labor Statistics (BLS) assumes a continued high level of immigration, and for the first time ever, BLS projections include estimates of illegal workers. If legal or illegal immigration to the United States were to slow, the Hispanic labor force would grow more slowly than the BLS projections assume. Likewise, should Hispanic immigration to the United States increase, then the Hispanic labor force would grow faster than the BLS projections assume.

Black labor force growth is expected to account for over 17 percent of the total. There are projected to be 16.3 million Blacks in the labor force in 2000, up 3.7 million from the 1986 level—a 29 percent increase. This represents a higher annual growth rate, 1.8 percent, than that of whites (1.0 percent—this includes Hispanics) and for the overall labor force (1.2 percent). By 2000, Blacks are projected to account for 12 percent of the labor force, up 1 percentage point from 1986.

Asians (includes American Indians, Alaskan natives, and Pacific Islanders) should account for more than 11 percent of labor force growth between 1986 and 2000. (This represents a slowing in their growth rate from the 1976 to 1986 period, during which their population was increasing rapidly due to the entry of refugees. This entry of refugees has virtually stopped and is not expected to occur again over the remainder of the century.) By the year 2000, there will be 5.7 million Asians in the labor force, up 2.4 million since 1986—a 71 percent increase. (This increase reflects a high rate of population growth, caused by higher births and immigration of this group.) This represents a 3.9 percent annual growth rate. Four percent of the labor force in the year 2000 will be Asian, up from less than 3 percent in 1986.

Because minorities will constitute a larger share of a more slowly growing work force, it might be assumed that their job opportunities will improve. However, geographic and educational imbalances could invalidate this assumption. Many minorities live in declining central cities: over half of Blacks and Hispanics live in central cities, compared with only 25 percent of whites; and 40 percent of all Blacks live in 11 cities, only two of which—Los Angeles and Atlanta—are in the highest-growth regions of the country.

In addition, a 1985 survey by the Committee for Economic Development found that, in general, the nation's schools were failing to help many young people develop "higher-thinking" skills—such as problem-solving abilities—that are increasingly in demand by employers. Particularly affected were young people who are poor, disadvantaged, and members of minority groups. This, combined with the current high rates of unemployment among minority youths, will have repercussions later in the century. A significant number of minorities will reach prime working age without having gained successful employment experiences. Longitudinal research shows that joblessness during youth quite often limits an individual's success in the labor market over the long term.

Other reasons for believing that minority job opportunities may not improve have to do with the nature of present minority employment. Blacks and Hispanics are concentrated in the more slowly growing occupations. An Equal Employment Opportunity Commission study found that Blacks and Hispanics were 35 percent

more likely to be employed in occupations that were expected to lose the most employees between 1978 and 1990.

Immigrants

Throughout the balance of the century, the immigrant share of the increase in the U.S. population and the work force will be the largest it has been since World War I. This is expected to be so despite passage of the 1986 Immigration Reform Act, which granted amnesty to aliens who entered the country illegally before 1982, tightened penalties against businesses that hire illegal aliens, and provided for the deportation of most aliens who entered the United States illegally after 1982. Approximately 600,000 legal and illegal immigrants are projected to enter the United States annually between now and the year 2000, and two-thirds or more of immigrants of working age are likely to join the work force. As a whole, immigrants will make up 23 percent of the increase in the labor force by the year 2000.

Immigrants represent a broad spectrum of social and educational backgrounds. Although some immigrant populations are doing quite well economically, many individual immigrants are not. The situation could get worse because the largest share of new immigrants are expected to come from Mexico and have limited skills. They will be entering a society that is increasingly committed to knowledge, high technology, and education.

In the past several decades, most new immigrants to the United States have settled in the South and West. For example, between 1970 and 1980 the number of foreign-born residents grew 120 percent in the South and 97 percent in the West, whereas at the same time the increase in immigrants in the North and Midwest was only 10 percent. With the majority of immigrants concentrated in the South and West, in those regions they are likely to reshape the local economies dramatically. They are expected to promote faster economic growth and labor surpluses.

Many Americans are concerned about the impact of continued immigration on the job prospects of native minorities in the United States. Evidence is not definitive. However, in one study that focused on Blacks in relation to Mexican immigrants in nearly 250 metropolitan areas, the conclusion was that Black unemployment rates do not necessarily increase just because the number of Mexican immigrants in a local labor market rises. These results suggest that, to some extent, immigrants perform jobs that complement, rather than compete with, the jobs of native minority workers.

Individuals With Disabilities

In 1980, 6.2 million American adults aged 18 to 64 reported disabilities that prevented them from working. That is 1 in 20 adults. Many others who have disabilities but are still able to work either find employment, or are employed in jobs for which they are overqualified, or are employed only part-time.

As the American economy continues to shift toward a service economy, businesses will emphasize knowledge over physical ability—a trend that bodes well for people with physical disabilities. Indeed, computer-aided technologies may make the next 12 years the best of times (thus far) for such people. Many of the disabled will have their first chance to become employees. And as the shortage of entry-level workers grows, businesses will probably begin to compete for this group of people who in the past were underused. New technologies, a shrinking labor force, and an already strong trend toward home-based employment could give many job applicants with disabilities the chance to gain the employment they desire.

TREND 3: EDUCATION, TRAINING, AND RETRAINING

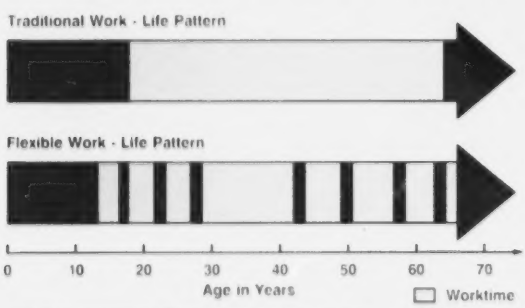
Worker education, training, and retraining are an increasingly significant part of coping with a rapidly changing, technologically advanced economy.

Americans are beginning to view education, training, and retraining as a lifelong process. With technological advances and shifts in the economy rapidly changing the nature of many jobs, a typical worker may expect to have five or six different jobs and three or four different occupations in a lifetime. And although two-thirds of the people who will be working at the end of the century are already in the work force today, 75 percent of them will need retraining.

Of the new workers, more than 90 percent will be women, minorities, and immigrants—groups that have traditionally been disproportionately disadvantaged and inadequately educated. This happens at a time when the greatest growth will be in jobs that require higher educational achievement and higher skill levels than ever before. Added to this is the increasing number of Americans who lack even the basic skills of reading, writing, and arithmetic, Americans who lack the knowledge and skill to use technology in their jobs, and Americans who lack a basic understanding of worldwide issues—in an increasingly global business environment. Faced with this scenario, American business is likely to find it necessary to enhance the educational system it already has in place.

Work-Life Patterns Changing

Traditional Uninterrupted Career Path Giving Way to Periods of Work, Education, and Leisure



Source: Fred Best, "Recycling People: Work-Sharing Through the Flexible Life Scheduling," The Futurist, February 1978
Updated: United Way of America, 1988

Illiterate America

Currently, 23 million American adults are considered functionally illiterate. These adults lack the reading, writing, and comprehension skills necessary to perform such basic tasks as reading the poison warning on a can of pesticide, filling out a job application form, or exercising the voting rights of citizenship. Another 35 to 45 million American adults are believed to be only marginally literate—reading below the eighth-grade level—and the situation is expected to worsen. The U.S. Department of Education estimates that the number of functional illiterates is growing by 2.3 million each year—including 850,000 high school dropouts and another 150,000 "pushouts" (students who graduate but who nevertheless lack adequate reading and writing skills). In fact, the literacy level of young people in America is declining so precipitously that, if trends continue, American businesses will be faced with the prospect of hiring a million new workers a year who cannot read, write, or count.

In addition to the many Americans who are illiterate in basic skills, many more are technologically illiterate. Yet an understanding of technological advances is becoming a necessity for many American workers. Nearly 40 states now offer some kind of technology-education courses within their school systems, and in many areas corporations are strongly backing such programs. Unfortunately, many education departments are finding they must train the teachers before they can train the students.

Illiteracy in terms of global basics also afflicts many American workers as our nation's economy becomes increasingly intertwined with those of other nations. One out of every six American jobs is directly related to foreign trade, and many more are indirectly related. Yet relatively few Americans have even a basic awareness of global geography and international political and economic issues.

Educational Preparation of New Workers

Demographic studies indicate that during the next 12 years, more than 90 percent of all new entrants into the American work force will be women, minorities, or immigrants—groups that traditionally have been disproportionately disadvantaged and inadequately educated. Yet, the greatest job growth over the remainder of the century will occur in areas that require high skill levels and demand creative thinking. A growing proportion of new jobs—75 percent—will require workers to have at least some college education. And whereas 60 percent of current jobs require a high-school diploma or less, only 25 percent of all jobs created between now and the year 2000 will require so little education.

In addition to requiring workers with more education, businesses will continue to seek employees who have productive work habits and a good command of the English language. This search will likely prove increasingly difficult in light of the projected increase in the number of Americans who are functionally illiterate—most of whom will have already passed through the nation's educational system.

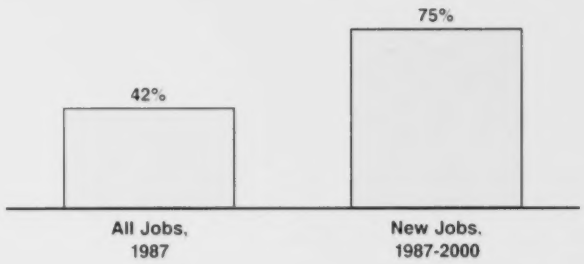
And promotion will be offered to employees who have "higher-thinking" skills, such as problem-solving abilities. A 1985 survey by the Committee for Economic Development found that, in general, schools were failing to help many young people develop these skills—especially young people who are poor, disadvantaged, and members of minority groups. In fact, most schools teach higher-thinking skills to college-bound students but neglect students in general education, vocational education, or low-track courses. Thus, even the proportion of youths in the general population is decreasing, a greater proportion of these youths will be unfit to fill the jobs that will be available.

But even college-bound students are often ill prepared in terms of basic skills, not to mention higher-thinking skills. Of nearly 1,400 colleges and universities surveyed recently, 84 percent had established "developmental studies" programs to teach remedial reading, math, and writing skills. The number of college freshmen entering remedial courses has risen 10 percent since 1978. This situation also affects businesses, which now invest at least $21 billion—one-third of all corporate training expenditures—to teach remedial education and fundamental job skills. In the last decade, the percentage of companies with 10,000 or more workers that offer remedial education has doubled, going from 15 to 30 percent. John Naisbitt, in a July 1988 *TrendLetter*, wrote that by the year 2000 more than 65 percent of large U.S. companies will provide remedial education for employees in order to boost productivity and reduce the number of costly mistakes.

Until now, the U.S. educational system has considered its major achievement to be the growing percentage of high-school graduates. Demographic trends—the fact that fewer numbers of people will be available to fill a growing number of high-skill jobs—indicate that

Most New Jobs Will Require Some College Education

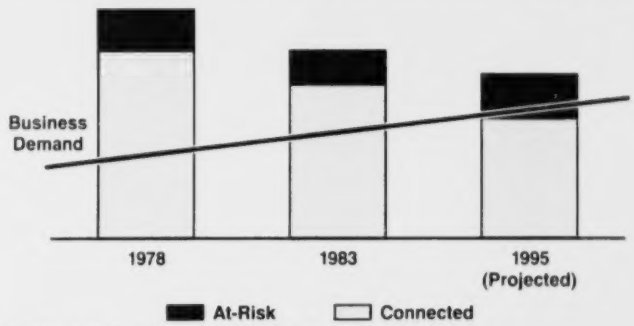
1987 - 2000



Source: U.S. News & World Report, September 7, 1987

Declining Youth Population Comprised of Increasing At-Risk Segment

While Business Demand Rises for Entry Level Employees



Source: Reconnecting Youth: The Next Stage of Reform, Business Advisory Commission of the Education Commission of the States, 1985

in the future the system will need, instead, to produce graduates of a higher caliber. Thus, educators will have to continue reducing the number of dropouts, while also helping young people develop the abilities they will need to hold the majority of jobs that will be available: high-skill jobs.

Compounding the pressure on the U.S. educational system is the lack of teachers with adequate training. Public schools already face critical teacher shortages in the areas of bilingual education, special education, math, and science. In bilingual education alone, eight out of ten teaching positions are currently unfilled.

And even when teachers are in abundant supply, their skills are sometimes called into question. Although only three states test their teachers in basic skills, the results of the basic skills tests done in 1986 are disappointing at the very least. In Georgia, for example, 13 percent of teachers failed the basic skills exam. Even after several retestings, 6 percent still could not pass. A greater number of states test new teachers for certification purposes. In 1986, 17 percent of new teachers could not pass their certification exams.

Retraining Current Workers

The majority of new jobs created between now and the year 2000 will require workers to have higher levels of educational achievement and to possess higher skill levels than were required by the majority of jobs created in the immediate past. Still, most workers will be in jobs—be they new jobs or continuing jobs—that are like those of today. What will be different will be the way in which technological advances affect those jobs. As a result, many workers will need additional training or education in order to perform their jobs. America's workers will need to be flexible, and capable of being trained and retrained. They will also have to be able to change jobs and occupations with ease and confidence.

Faced with the surging numbers of under-educated workers, U.S. companies are creating their own educational system. A report by the Carnegie Foundation determined that in 1985 the corporate education system rivaled that of the traditional education sector. The subject matter being taught in corporate classrooms goes beyond traditional business and work-related subjects. Classes encompass a broad range of topics, including foreign languages, English, psychology, sociology, and economics, as well as classes in analytical and creative thinking. Corporations now invest nearly $60 billion each year to train and retrain workers (one-third of this goes for remedial education—teaching the "basics" of reading, writing, and math to employees who lack these skills). And by 1990, the number of students they enroll is projected to equal the number of students attending four-year colleges and universities. Among companies relocating, there is currently a strong trend toward selecting sites that are capable of providing worker education and training.

Many companies are supplementing their in-house training with off-site training programs. As a result, businesses have become the biggest clients of America's two-year community technical colleges. Partly as a result of such programs, almost two out of five workers under age 35 have some college training. Millions more attend night school. A 1985 Carnegie Foundation report found that 80 percent to 90 percent of all corporations offer tuition reimbursement plans, mostly for job-related learning.

Interestingly, although corporate support to colleges has been on the increase, the share of corporate support to the nation's community and junior colleges is barely 1 percent. Yet these latter enroll 40 percent of all Americans who are trying to get a higher education and are providing much of the training and retraining of America's work force.

Providing educational programs for workers is in the best interests of business, because education has been found to correlate strongly with the work ethic. The higher an employee's educational achievement, the greater his or her commitment to the job.

TREND 4: THE CORPORATE ENVIRONMENT

Corporate restructuring and changes in the manufacturing and service sectors will continue to alter conditions of employment in the 1990s.

The rapid change which has characterized the corporate environment in the 1980s will continue into the 1990s. This section discusses two of the major types of change: corporate restructuring—the buying and selling of corporate assets—and the changing fortunes of the manufacturing and service sectors. Both will continue to have a profound effect on employment.

Corporate Restructuring

Corporate restructuring through mergers and acquisitions has touched nearly every major American corporation. Among the Fortune 500, restructuring has shrunk total employment by 2.8 million since 1980, and more than half of the Fortune 1,000 underwent significant restructuring during the 1980s. Mergers and acquisitions are only now beginning to show long-promised financial benefits to the corporations involved. Earlier, seven out of ten such transactions failed to achieve their financial objectives, and profits were depressed by losses incurred in the transactions. In 1987, however, corporate profits increased by an estimated 22 percent. If the economy continues to expand, those profits are expected to rise another 14 percent to 19 percent in 1988.

Mergers and acquisitions fell off sharply after the 1987 stock market crash but rebounded in 1988 to take place at a faster pace than at any previous time in this decade. The rebound has been due to the combination of low stock prices, which have lowered the cost of purchasing corporate assets, and the generally positive outlook for economic growth. In addition, the falling value of the U.S. dollar has attracted more foreign investors, particularly the Japanese, to U.S. stocks.

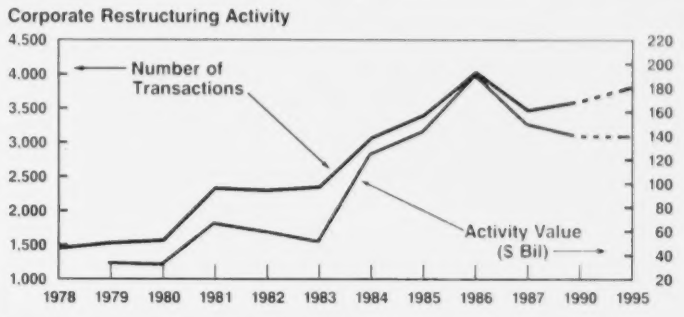
In the late 1980s, restructuring has a different emphasis than it did in the mid-1980s. That was the era of the "corporate raider," when wealthy investors bought large companies and then sold parts of them off for large profits. That era may be winding down, partly because recent changes in federal tax law, federal antitrust law, and state rules governing mergers have in effect made these hostile takeovers substantially more expensive and less profitable. In addition, corporate antitakeover strategies have become more sophisticated.

Corporations are to some extent replacing raiders as the main instigators of mergers and acquisitions. Stepped-up international competition has changed the marketplace, and more companies are trying to gain a competitive edge by selling off unwanted assets or buying, rather than building, new divisions. Economic rather than purely financial reasons are driving restructuring now. With the buying and selling of corporate assets considered standard business practice, the number of such transactions is expected to remain at a historically high level into the 1990s. However, a number of takeover experts are suggesting that, after eight years of the Reagan administration's hands-off attitude toward business, the mood of the country will favor more restrictions on business and that the Bush Administration will feel pressure to slow the pace of mergers and acquisitions.

Outlook for the Manufacturing and Service Sectors

An expansion of manufacturing production, after a prolonged slump, began in early 1988. It was caused in part by a lower U.S. dollar, which made U.S. goods more affordable overseas. Thanks to that resurgence, America's

Corporations Restructure Through Mergers, Acquisitions, and Divestitures



Sources: Mergers and Acquisitions, May/June 1988
Louis Ruckeyser's Business Almanac, 1988
Projections: United Way of America, 1988

manufacturing-intensive regions—like the East North Central region and parts of the Middle Atlantic, South Atlantic, and East South Central regions—will probably lead the nation in the late 1980s in gains in employment, sales, and construction. For the first time in over a decade, these regions are expected to undergo an expansion of manufacturing facilities and realize above-average increases in wage and salary incomes. However, years of corporate restructuring and investment in labor-saving equipment, as well as caution on the part of executives, are continuing to constrain the growth of manufacturing employment. Labor shortages are also limiting the growth of manufacturing employment. Many skilled laborers (such as machinists) who were laid off in the mid-1980s are not returning to their old jobs because they have found new jobs or have left the labor force.

The service-intensive regions, including New England and parts of the Middle Atlantic, South Atlantic, and Pacific Southwest, will probably experience slower growth overall because of spot labor shortages, consolidation in the service sector, and instability in the financial markets. The service industries that stand to benefit from a revived manufacturing sector will probably be finance, insurance, real estate, wholesale and retail trade, transportation, communications, utilities, and business and personal services.

Some service industries have not done well in 1988 in terms of employment. After more than $1 trillion in asset value was lost in the 1987 stock market crash, large-scale layoffs took place in New York's financial-services firms. (The stock market crash, moreover, is having far-reaching effects on the economy; for example, the lack of investment capital is cutting down on the number of independently produced films.) Layoffs are also likely to take place in the service industries that have been experiencing consolidation, including airlines, advertising, accounting, broadcasting, financial services, and communications. And in the late 1980s, the service industries as a whole are expected to contract in a number of service-intensive locations, particularly New England, Arizona, California, and such financial centers as Miami, Atlanta, Chicago, and Philadelphia.

Taken together, the expansion of the manufacturing sector and the contraction of the service sector are reversing the notion that the United States is becoming a bicoastal economy. Rather, rapidly changing national and international economic conditions are contributing to a diversification of each region's economy and narrowing the growth differentials between them. Large cities will no longer be able to take for granted the rapid growth of service-sector jobs; at the same time, manufacturing-intensive regions are beginning to see goods-producing industries rebound—industries that had been dismissed during the 1970s and 1980s as uncompetitive.

Impact of the Changing Business Environment on Employment

Both the decline of the manufacturing sector in the earlier 1980s and corporate restructuring cost many Americans their jobs. However, the large-scale staff reductions, which eliminated over 1 million middle-management jobs and 5.1 million blue-collar jobs during the 1980s, appear to have peaked. In the late 1980s, companies seem to be moving toward smaller-scale, more selective staff reductions.

One casualty of these layoffs has been corporate loyalty. The "psychological contract" between corporation and employee—hard work in exchange for lifetime security—has been seriously eroded. Whereas in the mid-1970s, managers worked for an average of only two companies in their entire career, today the average is close to seven and appears to be rising. Managers today report they feel a distance between themselves and their companies, and for their own protection they place loyalty to profession or industry above loyalty to particular corporations. Increasingly, jobs are seen as short-term financial transactions with a firm, rather than as a long-term commitment; and workers are seeing themselves as "self-entrepreneurs" running their own careers, rather than as employees.

Another casualty has been income, particularly for blue-collar workers with outdated skills. Between 1981 and 1986, 5.1 million blue-collar workers were displaced (out of a labor force of 110 million); by 1986, 67 percent were reemployed, 18 percent were unemployed, and 15 percent had left the work force. A study conducted by the Congressional Office of Technology Assessment found that of those workers who had found new jobs, 45 percent had taken a pay cut and, of that 45 percent, two-thirds were earning less than 80 percent of their former salaries.

One effect of the industry restructuring that has taken place is that workers in their 50s and 60s have often been prompted to take early retirement. Consequently, fewer men in that age range are now in the labor force. As for younger workers with marketable skills, growing numbers of them, after being laid off, are starting new businesses. Nearly half of the executives who do stay with an acquired firm leave within three years. One of three fired executives starts a new business.

One of the reasons large-scale layoffs are less likely to occur in the future is that companies have cut the size of their full-time work forces. Many companies are turning to part-time, temporary, and leased workers to reduce costs and improve flexibility. These workers often replace regular full-time employees at a lower wage and with fewer benefits. Restructured companies are increasingly turning over business functions to smaller firms on a contract basis. Engineering, data processing, advertising, and publications are frequently contracted-out functions, contributing to the steady growth of the business-services sector. Some experts predict that permanent employment in the typical American corporation will eventually shrink to one-third its current level.

One effect of these changes is that the standard 40-hour work week is less and less typical. The line between part-time and full-time work is becoming less clear, with the growth of part-time professional jobs and benefits for part-time workers. In addition, growing numbers of Americans are working both a full- and a part-time job, juggling two or more part-time jobs, moonlighting at home on a personal computer, or working and going to school.

Part-Time Work

The number of part-time workers in the United States has doubled since 1965. Part-timers now account for more than 20 million workers, or about one-fifth of the employed labor force. Nearly 78 percent of part-time jobs—versus 55 percent of full-time jobs—are in sales, clerical, service, and unskilled-labor occupations. They pay an average of $4.50 per hour, far less than the $7.80 per hour average for full-timers. Two-thirds of part-time workers are women, and only 33 percent of year-round part-time workers have health insurance, compared with 80 percent of full-timers.

Involuntary part-time workers (those who want a full-time job but cannot find one) account for more than 6 percent of the total U.S. labor force and 25 percent of all part-time workers. Between 1979 and 1987, involuntary part-time jobs grew about four times faster than full-time or voluntary part-time jobs. Slack work and the inability to find a full-time job account for nearly 94 percent of involuntary part-time employment.

Many companies that began hiring part-time workers during peak periods are now converting more of their low-level jobs to part-time status, sometimes giving part-time workers benefits normally reserved for full-time workers. Economists see the increasing use of part-time workers as a sign of a weak economy, because firms which use large numbers of part-timers are poised to lay off these workers should business slow.

Temporary Work

Between 1970 and 1986, the number of people employed by temporary-help firms grew by more than 500 percent, from 184,000 to 1,042,000. The temporary work force is estimated to be as large as 3 million people. Once composed almost entirely of clerical workers, temporary-help employees today consist of only 60 percent clerical workers. An estimated 10 percent are professional and technical workers (such as engineers, lawyers, computer programmers, and accountants) who may earn up to $150 per hour. The remainder are unskilled or skilled laborers.

The growth of temporary, as well as part-time, employment is one reason the unemployment rate has stayed relatively low in the mid-1980s. But temporary jobs are highly fragile and likely to disappear quickly in an economic downturn. Some companies have as many as 10 percent of their full-time workers in temporary positions. In addition, many large firms are subcontracting to small firms work the larger firms previously did themselves. One reason for the growth of subcontracting (which has helped produce the sharp rise in employment in small firms) is that if business weakens, larger companies can cancel a contract more easily than they can lay off permanent employees.

At a time when American business is leery about adding permanent workers, temporary jobs have been the only way into the labor force for millions of people. However, the growth of temporary employment is one of the reasons the wages and benefits of all workers have been rising so slowly.

The growing number of temporary workers could pose future health and human-service problems. Although some larger firms provide temporary workers with medical and pension coverage, most do not, potentially shifting these costs to the government and to voluntary sectors. (Partly because of the prevalence of temporary employment, more than half of the nation's 25- to 40-year-olds are pensionless, for example.)

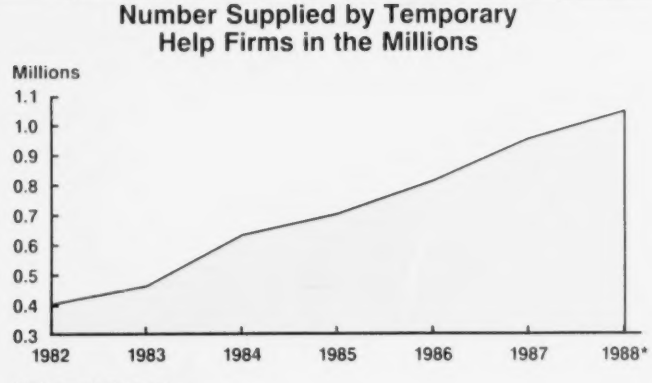
Employee Leasing

Temporary-help firms provide individual employees or small groups of workers to employers. By contrast, employee-leasing firms provide entire work forces, from production workers to managers, on a long-term or permanent basis. Leasing firms provide the services of a corporate personnel office on a contract basis.

More than 300 employee-leasing firms exist throughout the United States. They supply an estimated 50,000 workers to hundreds of companies. (Some estimates put the number of leased workers as high as 500,000 and predict a sharp increase in that number in the 1990s, particularly to serve smaller companies.)

Leasing arrangements can be a way for employees of small firms to gain benefits (paid through the leasing firm) that they might not receive from their employer. By leasing employees, companies can avoid the higher costs of recruiting workers, managing a payroll, and completing government paperwork.

Temporary Work Force Growing



* Through August

Data: U.S. Bureau of Labor Statistics, 1988

TREND 5: SMALL BUSINESS

The growth of the small-business sector is changing the business landscape.

As employment in America's largest corporations declines, small businesses are booming. Small firms—here considered to be companies with fewer than 100 employees—play a far more significant role in the American economy than they did even 10 years ago. There are more small firms in existence, and more being started, than ever before. These firms are responsible for two-thirds of the Gross National Product and, directly or indirectly, supply the livelihood of half the U.S. population.

The small-business boom signals a "changing of the guard" of business leadership in two senses. First, local economic power is becoming more widely dispersed. While the reins of local corporate leadership have in the past been held by a few large firms, the next generation of leaders is likely to be diffused among a greater number of smaller companies. In addition, the roster of the nation's major industrial corporations is turning over. Major firms such as Microsoft, Federal Express, and Wang Laboratories were once small businesses. Likewise, a number of today's small businesses will grow to become major corporations in the years to come.

Small Business Is Growing

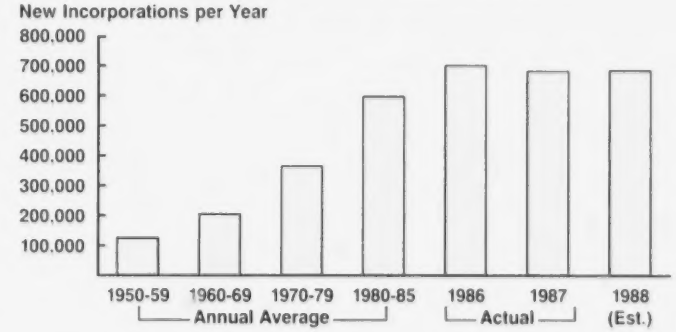
The number of new-business starts in the U.S. is at a historically high level, although its growth rate has fallen off since 1986. Since 1985, the official number of new-business starts (those for which Dun and Bradstreet numbers were issued) has averaged about 250,000 per year. However, the National Federation of Independent Business reports an independent estimate that the actual number of business starts may be as much as double the official figures. The number of new incorporations, including business starts, reorganizations, name changes, etc., has doubled over the past 10 years, from an annual average of about 360,000 in the 1970s to an average of 620,000 per year in the 1980s.

Most small firms exist to provide an income for the owner's family. Only a minority, approximately 10 percent, are rapidly growing companies likely to become mid- or large-sized corporations. Rapid growth of a firm is strongly associated with that firm adding new jobs and remaining in business, according to a 1988 Small Business Administration study. The study found that of firms that started with fewer than five employees and did not grow, nearly three out of four were out of business within six years. Nor did being large at the outset help firms stay in business: 66 percent of all firms that started with from 5 to 499 employees were out of business within six years. By contrast, only 22 percent of new firms with 1 to 500 employees who added 10 or more jobs over the same six-year period went out of business; fully 78 percent survived. For all new businesses, just under 40 percent reached the six-year survival mark. That figure rises to more than 65 percent when only firms that added employees are considered.

The growth patterns of small firms can appear paradoxical. The number of bankruptcies tends to go up along with the number of successes. And the firms that are most likely to expand in any one period are precisely the ones that contracted during the previous year or two.

The boom in the number of start-up small businesses is changing the landscape of corporate America and creating a great deal of turbulence in local economies. While some small firms grow into major corporations, half of all new companies close within five years

New Business Incorporations Remain at High Level



Source: U.S. Department of Commerce, Bureau of Economic Analysis, 1988
Estimate: United Way of America, 1988

from lack of money, lack of energy, or both. From this turbulence have come most of the economic growth and new jobs in the 1980s. Recognizing this, state economic development strategies now emphasize improving the entrepreneurial climate of the state rather than attracting relocating corporations.

However, some analysts are suggesting that the rapid proliferation of small firms may be harming as well as helping the economy. The breaking up of industries into too many small companies, the *Harvard Business Review* claims, is making it harder for U.S. firms to compete against Japan's larger and wealthier firms. Moreover, in order to raise capital, many small American firms have had to sell their technological secrets, which allows foreign companies to purchase the latest American technology inexpensively. In addition, large companies may be reacting to the departure of employees-turned-entrepreneurs by underinvesting in new technology and worker training. They may be reluctant to make such long-term investments when they suspect they will not keep their employees long enough to reap the benefits.

What may ultimately develop is more cooperation between large and small firms, with each doing what it does best. Whereas large firms are often best at the long-range basic research and development that leads to innovation, small firms are generally better at turning these discoveries into products (a frequently cited weakness of American industry). After products are developed, large firms are often best at manufacturing and marketing them.

The Entrepreneurial Spirit

A sizable proportion of men (38 percent) and an even greater proportion of women (48 percent) say that being the head of their own business is their dream. Indications are that the next generation has even more of an entrepreneurial spirit. Fully 52 percent of college students polled say they plan to start their own businesses within 10 years. Younger men and women beginning their careers see the ranks of middle management thinning in large corporations and increasingly set their sights on starting their own businesses, seeing that as the path to good earnings.

Consequently, more training for entrepreneurs is available than ever before. Currently, 250 colleges and universities in the United States offer courses in starting a new business or in entrepreneurship. Many entrepreneurs themselves have started businesses offering such training. Buying a franchise is proving to be a popular way to become an entrepreneur. By the end of 1988, the estimated number of franchised outlets will be 509,000, up from 479,000 in 1987. Franchising is growing at nearly four times the rate of the economy as a whole. The fastest-growing franchises include sit-down (not fast-food) restaurants and hotel and motel chains.

Behind this boom in entrepreneurship is a number of economic and personal factors that are encouraging a growing number of Americans to strike out on their own. One key element is the sheer excitement and appeal of new products and technology (many computer whizzes have become entrepreneurs) coupled with the relatively low entry cost of starting many businesses. Second, many laid-off workers, both blue- and white-collar, have discovered that existing corporations have no jobs for them. Short of moving to another region of the country or retraining in a new skill area, the only realistic option they have is to start a business. Third, once large firms scale down, they often contract out some of their business functions to small "satellite" firms. Such firms are constantly being formed in the vicinity of large firms to meet this need. Fourth, the technology to support a new business—computers, telecommunications, delivery, and so forth—is becoming increasingly inexpensive. A computer-literate individual with a personal computer can write proposals, do accounting and budgeting, and track inventory—tasks that just five years ago would have required additional staff.

A National Federation of Independent Business Foundation study found that of the entrepreneurs it studied, 64 percent started their own businesses and 30 percent purchased an existing business. The vast majority—72 percent—used their own savings as capital, and less than 1 percent were financed by venture capital.

Interestingly, making money was not the main reason most of the entrepreneurs studied opened their own businesses. Twenty-nine percent wanted to build a successful organization, 26 percent wanted "to do the kind of work I want to do," and 18 percent wanted to avoid working for others. Only 18 percent were primarily motivated by an opportunity to make more money than they could have otherwise. However, the study emphasized that, because entrepreneurs have a tremendous variety of backgrounds, motivations, preparation, and management philosophy, starting a business is a very personal process for each entrepreneur.

Small Business and Women

The small-business boom coincides with the growing participation of women in the economy and has a strong female component. Nearly 3.5 million women run their own firms, up from 700,000 only a decade ago. Women are going into business for themselves at twice the rate of men, and the annual growth rate of women-owned businesses (9.4 percent) is more than twice the growth rate of businesses owned by men. Businesses owned by women have an estimated $54 billion in receipts annually and represent 25 percent of all receipts of small businesses.

Small Business and Minorities

The volume of business done by minority-owned business and self-employment grew by 64 percent between 1975 and 1985. Black-owned enterprises had estimated receipts of $18.1 billion in 1987. Although this represents just 0.3 percent of receipts for all business, receipts of Black-owned businesses are growing at 7.9 percent per year, faster than the 5 percent annual growth rate of receipts for business nationally. Moreover, businesses owned by Blacks are diversifying beyond the Black consumer dollar. Other minority groups are creating businesses specifically to serve the growing needs of the new wave of immigrants (particularly Hispanics and Asians) in some regions.

Many minority-owned businesses—including 55 of the top 100 Black businesses—are in the retail sector and their importance in the overall national economy is small and growing slowly. However, in regions where immigrant groups are concentrated, minority-owned businesses are very important to the local economy.

Impact of the Small-Business Boom on Employment

The shift of employment from large corporations to smaller firms is likely to continue. The fundamental reason is technology. America grew to be a nation of large corporations because the major industries—steel, automobile and petroleum—were based on technologies such as the blast furnace and required heavy investment in capital equipment. The industries that will dominate the future—such as services and high-tech manufacturing—use technology which is far less expensive, such as computers. These industries can be small and make a profit.

Small businesses have been responsible for nearly two-thirds of the job growth in the 1980s. Between 1981 and 1985, start-up companies in the United States created over 14 million jobs (700,000 more than were lost in company failures). Of the 2.6 million new jobs created in 1987, the vast majority were in companies with fewer than 100 employees. And among small business, a minority of rapidly growing firms created 86.4 percent of new jobs. By way of comparison, job creation in Europe has been stagnant for years, and unemployment in some countries remains stuck in double-digit figures. An estimated 20–25 million new jobs must be created in the United States over the

Net Gain in New Jobs Dominated by Small Business

Source: Inc., September 1987

next 25 years to replace jobs that will be lost and to keep the unemployment rate at current levels; small business is expected to create most of those jobs.

Owning one's own business continues to be, for some, the American way to independence and wealth, but the expansion of small business may create a distribution-of-wealth problem. Although some owners become millionaires, employees do not fare as well. Salaries are often lower, especially when firms are young, since money is being invested in expanding the business. Many small businesses provide services, and the average wage in that sector is lower than it is in manufacturing. In 1986, the average weekly wage in the manufacturing sector was $393, while the average weekly wage in the retail sector (where the greatest number of service jobs will be created) was $175. Higher-wage service industries such as finance, insurance, and real estate still average only $299 per week.

In addition, benefits are often less generous than in a large corporation, and small firms generally do not offer additional benefits such as day care, elder care, and maternity or paternity leave.

TREND 6: THE GLOBAL MARKETPLACE

The globalization of the international economy will continue to influence American business operations and philanthropy.

As the United States economy becomes more fully integrated into the global economy, it is no longer sufficient to look at the future of work from only a United States-based perspective. Actions by foreign nations and companies are increasingly shaping the U.S. economic and employment pictures. More foreign firms are locating plants and investing funds in the U.S., and more U.S. firms are expanding overseas. U.S. management styles are changing as they adapt to foreign management practices, particularly those developed by Japanese firms. And a global work force is emerging, one which both threatens the high level of U.S. wages and demands that the U.S. improve the skill level of its work force in order to maintain its economic standing.

The Global Economy

The era of U.S. dominance of the world economy has ended as other nations are catching up. Whereas America once produced 50 percent of the world's goods, it now produces only about 20 percent of a much larger global output. Likewise, the U.S. depends on international trade for 25 percent of its economy, up from just 16 percent in 1970.

The most significant overseas economic growth has taken place in Asia, an area many observers feel will be the seat of global economic power in the 21st century.

Some observers, both in the U.S. and abroad, claim that, as a result of overseas economic growth, the U.S. is in danger of losing its position as a world leader. However, others find considerable evidence for a continuing U.S. leadership role in global affairs. The U.S. still has the world's largest economy and remains a world power. English is still the universal language; the dollar, though weakened, is still the world's currency; the U.S. economy, though growing slowly, is still twice the size of Japan's; and the U.S. still provides military protection to the Western nations.

However, there is consensus that the growing integration of the U.S. economy with those of other nations has produced a significant change: in the words of The Conference Board, "The U.S. is no longer in charge of its economic destiny."

Two dangers are posed for the United States by this situation. The first danger is that, as more countries industrialize using newer technologies, they are quickly becoming competitive threats to the United States. Although Japan is now the U.S.'s main competitor, the newly industrializing countries—the "Four Tigers" of South Korea, Taiwan, Singapore, and Hong Kong—are becoming significant U.S. competitors. In addition, nations such as Brazil and the Philippines will be stronger competitors in the future.

A second danger is that an overly competitive global economy may leave no single nation strong enough to manage world economic growth. When the U.S. dominated the world economy, it served as a "global economic policeman." When global economic growth faltered, the U.S. simply spent more money; this was enough to single-handedly prop up world economic growth. Now, no one nation has a large enough share of the global economic pie to do that alone, and the major industrial nations—the U.S., Britain, West Germany, and Japan—have yet to coordinate their economies to fill the void jointly.

This power vacuum is particularly important now because global economic growth is slowing. The rate of global economic growth in the decade following the 1973 OPEC oil embargo was only half that of the decade before. Some economists note that a similar power vacuum occurred in the 1920s as British economic dominance waned and the lack of a mechanism for improving economic growth then helped cause the Great Depression.

Most economists are predicting that the U.S. economy will experience slow but stable economic growth during 1988, and a possible recession by 1990. Inflation is expected to increase to the 4 to 5 percent range, fueled by falling unemployment. However, there is a wide range of opinion about where the current record-long economic expansion is heading. Some economists claim that a full-scale economic recession is unlikely, and that only selected industries will be hit by a downturn.

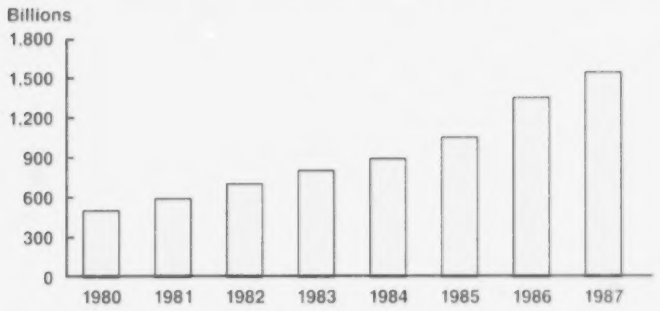
Other economists predict a full-blown recession as part of the normal business cycle in 1989. But nearly all note that there is a great deal of uncertainty in all these predictions, in part because the globalization of the economy has created new patterns of economic growth that make economic forecasting more difficult. As Federal Reserve Board Chairman Alan Greenspan has said, "We're in unknown territory."

Foreign Investment in the U.S.

One effect of more closely linked national economies has been the rise of foreign holdings in the United States, both in direct investments (such as factories and office buildings) and debt instruments (such as stocks and bonds). These holdings grew more than tenfold between 1970 and 1987, rising $106 billion to $1.54 trillion. (Foreign firms believe that by acquiring U.S. manufacturing facilities, they will have a foothold in American markets if the United States erects trade barriers.) Foreign investment continues to rise, partly because U.S. stock prices have been lower since the 1987 stock market crash and partly because the value of the U.S. dollar has been falling. (Many foreign currencies go further in the United States than in their own countries.)

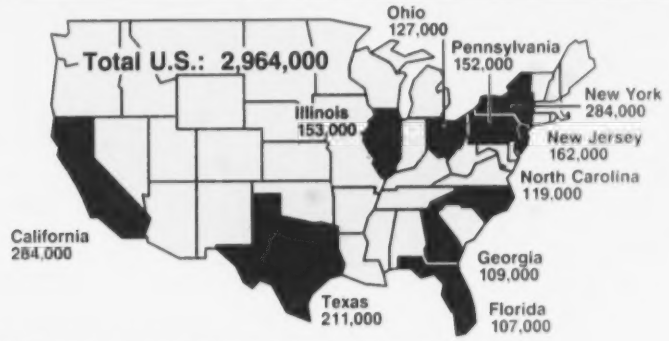
Foreign Investment Hits Record Levels

Direct and Portfolio Investment



Data: U.S. Department of Commerce, Bureau of Economic Analysis, 1988

58% of U.S. Employment in Foreign-Owned Corporations in Just 10 States



Data: U.S. Department of Commerce, Bureau of Economic Analysis, 1988 (Data is for 1986)

Source: United Way of America, 1988

The $1.54 trillion which foreign interests hold in the U.S. is still only a small fraction of the entire U.S. economy: only 2 to 3 percent of U.S. industry is foreign-owned, and the largest share of that (20 percent) is owned by British interests. Japanese investment, which ranks third (after Canadian), is considered the most significant because of the large U.S. trade deficit with that country. Japanese investment in U.S. manufacturing facilities has tripled every year since 1980 and was valued at $20 billion in 1987. The Japanese Ministry of International Trade and Industry projects that Japanese direct investment in the United States will rise 15 percent per year through the year 2000. By 1990, 1.6 million Japanese cars are expected to be produced annually in the United States, approximately as many cars as are currently imported from Japan.

Of a total U.S. labor force of about 118 million, only 2.5 million to 3 million are employed in foreign-owned companies, of whom about 250,000 work for Japanese companies. During the next decade, however, Japan expects to add an additional 840,000 jobs in the United States.

Philanthropy on the Part of Foreign-Owned Corporations

Unlike the British, whose philanthropic activities in the United States have been confined to helping the arts and the very poor, the Japanese are quickly developing a track record for American-style corporate philanthropy.

Hitachi recently endowed a $20 million charitable foundation and Toyota a $10 million foundation. Other Japanese firms have indicated an interest in establishing other foundations. The Japanese are particularly eager to "fit in" in the American communities where they open plants. Charitable donations from Japanese-owned U.S. firms have quadrupled since 1984 and now total about $100 million. Japanese-owned businesses are being inundated with funding requests from nonprofit groups that have lost donations from merged and downsized American corporations.

Overseas Investment by U.S. Firms

At the same time that foreign firms are increasing their presence in the United States, American corporations are increasing their foreign investment. In 1982, American corporations had total assets overseas of nearly $3.8 trillion and they employed nearly 20 million people outside the United States. Some American firms have preferred to set up profitable operations in low-wage countries rather then improve the productivity of their U.S. operations. Many of these overseas operations assemble components shipped from the United States, then ship the finished goods back for sale in the United States. For example, 300,000 Mexican workers currently do such work in U.S.-owned or -operated facilities. Other U.S.-owned industries, such as airlines, have taken advantage of computer technology to move much of their data-entry work to Caribbean countries, China, and other developing countries, where workers often make the equivalent of 10 to 20 cents per hour. In the future, the integration of computers with telecommunications may allow companies to mete out their data-entry work as "electronic piecework," shopping the globe to get the best price.

U.S.-based corporations are also entering into more partnerships with foreign firms. These partnerships give the U.S.-based corporations easier access to raw materials, new management ideas, and new sources of capital. These partnerships facilitate the movement of workers across international borders. At the same time, these multinational partnerships have no stake in the economic health of the United States or any other individual country.

The "Japanification" of Management

In an effort to improve the international competitiveness of U.S. corporations, American executives are studying the management styles of countries (such as Japan and Korea) which have been competing very successfully in the world economy. These executives are adapting specific Japanese techniques to successful American approaches to create a new style that blends the best from both countries.

The Japanese style of management differs significantly from the American. Five differences are highlighted below.

First, the U.S. management style is to maximize profits, whereas the Japanese style is to emphasize quality. In today's economy, with more goods than customers, only quality goods are profitable. An emphasis on quality is more attuned to this reality than is an emphasis on profits.

A second difference between Japanese and U.S. management is in their approach to innovation. In the United States, innovation tends to take the form of quantum leaps to new products. By contrast, the Japanese emphasize "kaizen," or gradual, unending improvement of existing products. Third, American management concentrates on the short term, whereas Japanese executives focus on the long term. Similarly, before negotiating business deals, the Japanese spend more time establishing trust, whereas U.S. managers want to negotiate quickly.

Fourth, Japanese managers emphasize people rather than machines as the key to increased productivity. As a result, Japan leads the world in the science of ergonomics (the design of workplaces that integrate workers and equipment in "socio-technical systems"). This has helped Japan move far ahead of the United States in factory automation. Many major American automation projects have been slowed or canceled because of problems matching worker knowledge and training with automated machinery. When machines were simple, worker involvement in design and management of automated systems was less important; for the more complex computer-controlled machines, worker involvement is critical.

And fifth, in Japanese firms, more executives tend to work near employees instead of in a separate executive suite. As a result, the executives enjoy more informal, face-to-face communication with technical staff and production workers. This facilitates a rapid flow of information, which in turn makes quick problem solving and the fine-tuning of operations—increasingly important in a rapidly changing economy—easier to accomplish.

Some of the management innovations American executives have developed from observing foreign management styles include: quality circles (worker groups that meet to solve workplace problems); pay-for-knowledge (paying workers in terms of their range of skills rather than giving them simply "a day's pay for a day's work"); peer- and self-assessment; the linkage of salary increases to overall corporate performance; and the encouragement of entrepreneurial activities within the company ("intrapreneurship").

The Global Work Force

Shifting world population distribution, rapid industrialization, and the diffusion of knowledge and technology around the world are creating a global work force, which will increasingly compete with U.S. workers for jobs and wages.

The distribution of global population is shifting inexorably toward the Third World, which by the year 2020 will be home to five-sixths of the world's people. This is happening because the birth rate is very high in developing countries, whereas in Western industrialized countries the birth rate is near or even below replacement level. And it is not only the population that is growing in the Third World, but also the number of workers available to industry. Workers are continuing to move from the farmlands to large cities and women are increasingly moving into the labor force. Moreover, because local economic conditions are so bad, people living in these countries welcome the jobs—such as sewing, entering data, and assembling simple electronics components—brought in by multinational corporations.

In the future, therefore, the relatively high level of wages paid to U.S. workers will be threatened by the lower wages paid to an increasingly skilled international labor force. Although industrial wages in Japan and Germany are now reaching parity with U.S. wages, workers in the underdeveloped world still earn only a small fraction of what U.S. workers make. For example, data-entry operators in China who work for U.S.-based airlines earn the equivalent of about 10–20 cents per hour.

Similarly, at the "high end" of the job market the high technology jobs will also be subject to increasing global competition. Scientific and technological knowledge is spreading around the world, eroding U.S. dominance.

Aside from having a rapidly growing labor force, newly industrializing countries are adopting innovations such as automated manufacturing faster than many industrialized countries. This is quickly bringing their economies into the industrial mainstream, enabling them to produce sophisticated products that are competitive with goods produced in the United States. Rather than adopting industrial models developed in the United States, today industries in newly industrializing countries are creating their own models. The biotechnology industry, for example, is emerging in many countries simultaneously.

As even more countries industrialize, competition for markets will increase, putting even greater pressure on the established industrialized nations to cut costs. This will tend both to push U.S. wages down and encourage further automation.

Some observers see the newly industrializing countries becoming low-cost producers of industrial goods, while the United States and other industrialized countries constantly extend the technological edge with new research and products. Computer technology and automated manufacturing will help make this possible. However, in order to meet this challenge, the U.S. will need to develop an increasingly skilled and versatile work force.

TREND 7: AUTOMATION

Automation, computerization, and robotization will spread through the workplace, changing both the nature of work and what it takes to be successful in the marketplace.

The presence of robots and computers in the workplace is changing both the kinds of jobs Americans will hold between now and the year 2000 and the kinds of workplaces these jobs will be performed in.

Automation

Automation—the use of machines to replace physical or mental labor previously performed by human beings—is the first development since organized agriculture to change the fundamental way human beings are organized to live and work. Earlier in this century, automation "de-skilled" work; it substituted machines for worker know-how. Goods which had been produced by skilled craftsmen were subsequently produced by unskilled assembly-line workers. Current automation efforts promise to have equally profound, but decidedly different, effects on the workplace. For example, by making it possible for people to work wherever a personal computer can be set up, computer technology is disconnecting work from a fixed workplace, as well as from a fixed schedule.

Harvard Business School professor Shoshana Zuboff is representative of experts in workplace technology who emphasize that automation can take two different paths. Computer technology has the potential either to "de-skill" or to enrich work. When it is used to "automate," that is, to replace human labor, it simply takes over skills that the worker once used, reducing skilled work to unskilled work. But computers can also be used to enrich or, in Zuboff's term, "informate" work. This term refers to the fact that, in addition to doing work, computers also produce new information about the work. "Informating" involves using that information in new ways to improve work. For example, information produced by supermarket scanners to speed up check-out is being used to better manage inventory.

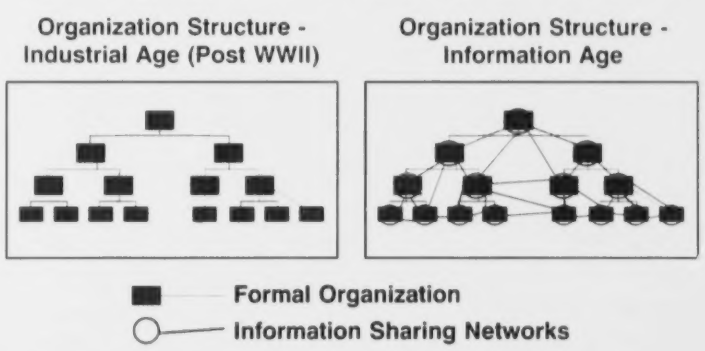
Zuboff writes that the "informating" capabilities of computer technology are not yet well understood, although the information produced by computer technology is an important new organizational resource. The combination of on-line transaction systems, information systems, and communications systems now brings together data that were formerly kept in people's heads, shared in face-to-face conversations, stored in metal file drawers, and scattered in notes and memos. Recognizing the value of this information and using it effectively and creatively have become key issues for organizations that seek to improve their competitive position.

Zuboff offers two sharply contrasting scenarios of the workplace of the future to illustrate what she sees as the consequences of automating, on the one hand, and "informating," on the other. An emphasis on automation, or on simply doing what is currently being done but doing it more efficiently, will tend to "de-skill" work as the human being is increasingly replaced by, or at least guided by, the machine. Managers and workers will become more remote from each other, access to information will be restricted to a select few, and face-to-face administration will be increasingly augmented by computer surveillance and monitoring.

An emphasis on "informating," or using the power of newly created information resources, will tend to enrich jobs. The employee will be viewed as the master and the computer as the tool the employee uses to do a job more effectively. The managerial authority that has been built on exclusive control of an organization's knowledge base will diminish. Because the computer integrates information across space and time, both managers and workers will have instantaneous access to information. Authority will probably become less a function of holding a particular place in

New Organization Structure Evolving

Technology Applications Enhancing Information Flow


Organization Structure - Industrial Age (Post WWII)
Organization Structure - Information Age
Formal Organization
Information Sharing Networks

Source: United Way of America, 1988

the organizational hierarchy and more a function of having the knowledge to assume particular responsibilities. Administration will be carried out in a more collaborative way. Information will be seen as the resource from which are fashioned innovative methods of problem solving and social exchange. Zuboff claims these new relationships will tend to produce a deeper sense of collective responsibility and joint ownership as ever-broader domains of information are tapped.

Why Automate?

For American business, automation has become a matter of survival. American business is applying new technologies (such as computers, robotics, telecommunications, artificial intelligence, and biotechnology) in an effort to cut costs and stay in front in an increasingly technologically sophisticated global marketplace. That trend will accelerate through the remainder of the century.

However, the economic reasons for the current emphasis on automation go even deeper than U.S. competitiveness in the global marketplace. In a recent survey, fully two-thirds of American business leaders expressed the view that the nation's economy is undergoing a major structural revolution. George Washington University business professor William Halal describes that revolution as a shift from "hard growth," which emphasizes the use of new raw materials to create products, to "smart growth," which emphasizes the use of information—and information technology—to develop more advanced products and services.

According to Halal, "hard growth" is no longer feasible because pollution, energy shortages, and other already-high environmental costs would grow dramatically if the developing world followed the West's industrial path. With respect to pollution, for example, there is already considerable concern that the greenhouse effect, a warming of the earth brought on by ozone depletion as a result of industrial waste, may have already begun. "Smart growth" has the potential not only for creating wealth at far less cost to the environment, but also for ameliorating some of the damage already done.

Robotics

In recent years, attempts to create "mechanical workers" focused on developing machines with wide-ranging human-like capabilities. Because the results were disappointing, the aims of the robotics industry have now been scaled back to creating (as one researcher put it) "enhanced power tools." These newer robots are designed to serve as intelligent assistants to human beings rather than as their replacements. In addition, today's robots are modular in design—flexible enough to be programmed to do a variety of jobs—rather than limited to a single function. This refocusing of design efforts is beginning both to revive sales of industrial robots and to reduce their cost. A welding robot cost $150,000 five years ago; today, such a robot costs only half that amount.

Currently, approximately 30,000 robots are in use in the United States, performing tasks ranging from assembling computers and artillery shells to assisting with brain surgery and helping disabled individuals with daily tasks. Once found primarily in factories, robots are being developed for use in construction and mining, where they are taking on functions that are dangerous for human beings, as well as making up for labor shortages.

Robots are also being developed for use in service industries, and there, too, they are compensating for labor shortages. One firm is now testing a simple robot designed to deliver meal trays to patients in hospitals and nursing homes. Several fast-food chains, dependent on a shrinking pool of young workers, are investigating semi-robotized restaurants. Robot security guards are already on the job, supplementing human guards, and robot systems designed to help the disabled use computers will allow more of the disabled to hold office jobs.

The assumption that automation would turn factories over to the robots has proven to be inaccurate. One study of automation in the automobile industry—pioneers in robotics—showed that although the shift from labor-intensive to semiautomated factories cut manpower requirements by 50 percent, the subsequent shift to complete automation cut staff by just an additional 20 percent. The number of manual laborers actually increased, as

did the number of computer technicians, and only the number of maintenance mechanics was significantly cut.

Surprisingly, managers are discovering that robots are not the key to successful automation. A Massachusetts Institute of Technology study of automation in the auto industry worldwide concluded that automation per se has nothing to do with the level of output per worker. Rather, the key to increasing worker productivity is the integration of worker and machine in a smoothly running, tightly scheduled system. The quality of the staff, rather than the quantity, is becoming the critical issue in efforts to improve manufacturing productivity. In a recent survey, automotive engineers placed employee training well above new technology as their overwhelming priority.

The Computer

The use of computers in the workplace will grow substantially in the 1990s. By 1990, an estimated 49 million white-collar workers will use keyboards, nearly double the 26 million who used them in 1985. By the year 2000, the ratio of terminals to workers is expected to approach 1:1 because offices will increasingly use computer systems rather than paper to store more kinds of data. By 2000, in fact, the falling cost of data storage on magneto-optic disks (similar to those used in CD players), coupled with the improved quality and lower prices of laser printers, may make it cheaper to store virtually all data electronically than to maintain paper files. However, the "paperless office" is unlikely to become a reality. Improved publishing and graphics software are increasing the demand for printed material. People are far less willing to give up paper than initially expected. (In addition, computers are becoming much easier for nonspecialists to use, with more "user-friendly" software that even casual users can modify.) Increasingly, therefore, the computer will cease being a novelty and will become the office workhorse. Individuals who do not acquire computer skills may find themselves limited to jobs that deal primarily with people or involve physical labor.

In the longer term, more people will enter data in computers without using keyboards. For example, optical character recognition (OCR) machines, also called optical scanners, currently can read a printed page directly into a computer's memory. And voice recognition (VR) technology will be able to translate a user's spoken word directly into the computer's memory. VR systems with small vocabularies should be available for limited data-entry use in the 1990s. Digital sketch pads allow users to write and draw directly into a computer's memory, using portable, keyboardless, electronic notepads. These machines are beginning to come on the market.

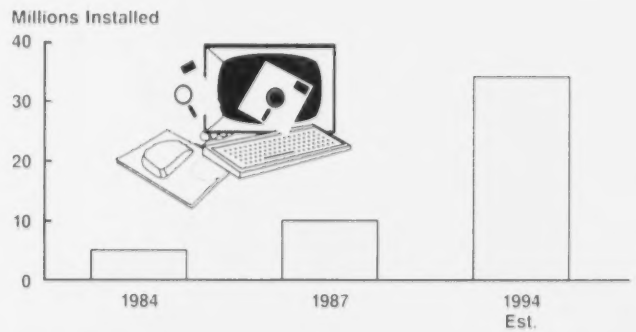
Some futurists say that over the next 30 years, the personal computer will evolve into an intellectual and even emotional work partner whose cognitive skills will far exceed our own.

Communications Networks

During the 1990s, computers, telephones, photocopiers, portable cellular telephones, word processors, and "smart" typewriters with memory will gradually become linked in networks. Already, the sharp distinction between voice and data communications has begun to blur. In addition, a 1987 court decision allowing Bell systems nationwide to offer data transmission services will help make these services more widely available.

Improvements in telephone service, both in the United States and around the world, will help make networking easier, faster, and more widely available. Digital transmission equipment and the fiber-optic telephone lines currently being installed will speed up data transmission by a factor of ten over the copper wiring and analog transmission systems currently in use. Telephone systems around the world are moving

Number of Personal Computers in the Workplace to Rise Sharply



Source: PC Computing, September 1988

slowly toward global standardization via the Integrated Services Digital Network (ISDN), which will further speed up communications. This network will enable a user in one part of the world to instantaneously transmit voice, data, text, video, and anything else that can be encoded digitally to another part of the globe. By the end of the 1980s, AT&T will have converted its long-distance services to the ISDN format, with other long-distance carriers expected to follow suit.

The integration of phone lines and computers will affect the way companies do business. An organization's ability to communicate—both internally and with suppliers, customers, and contributors—will increase. Electronic work stations will begin to combine data, voice, and graphics capabilities, eventually making separate components obsolete. Current on-line computer networks, now limited to transmission of computer messages, will be upgraded to local area networks (LANs) that will add voice and graphics transmission capabilities. Large corporations that develop private integrated networks may enter the market as suppliers of telecommunications services, competing directly with telephone companies.

Already, communications networks are changing the relationships within companies and within communities. Workers using electronic networks and bulletin boards (such as United Way of America's Human Care Network) can communicate with large numbers of their co-workers by pushing a few buttons. Interactive communication, or question-and-answer sessions on various topics, can be used by employees to generate new ideas. Networks can also become "secret clubs" and bypass hierarchies by virtue of the invisibility of their communications. And both within companies and within the community, communications networks are being used as organizing tools. They make it possible to create groups that meet, develop strategy, and take action electronically, unbeknownst to anyone not in the group.

The cost of communications networks will continue to decline as their sophistication increases. With the advent of the ISDN, virtually every household that can afford a telephone and a personal computer will have access to what are now considered advanced services: home banking, videotex (home shopping by computer), electronic mail, and even home security monitoring from a remote location are examples of services that will be available. Sears, J. C. Penney, Grand Union, General Mills, and ITT are currently developing videotex television to allow customers to shop at home by using remote viewing.

The increasing availability of computer technology, however, may serve to intensify social inequality. As many as one-fifth of all low-income households are currently unable to afford even basic telephone service because of high installation costs. As the telephone, connected to a computer, increasingly becomes the gateway to the wider world, the poor may be even more shut off from the middle class than they are now.

Artificial Intelligence and Expert Systems

Artificial intelligence (AI), or computer programs capable of "learning" from experience, is only beginning to make its presence felt in the workplace. The development of this technology could further accelerate a shift toward electronic data storage. Programs to convert existing paper libraries to disk and to automate some aspects of writing software are coming on the market. Right now, companies are using expert systems—decision-making programs that fall short of being truly "intelligent"—to capture the expertise of workers who have developed an exceptional competency (for example, those near retirement), in order to continue to draw on their skills. Physicians are using such systems to assist in diagnosis. In the future, AI and expert systems may become part of organizations' computer networks, handling routine operations and decision making automatically.

Electronic Fund Transfers

Electronic fund transfer (EFT), or the direct transfer of funds from one account to another without human intervention, is currently growing at the rate of 15 percent per year. In addition to having paychecks deposited automatically, individuals are paying bills and making charitable contributions electronically on a predetermined schedule.

Currently, charitable contributions are a small percentage of EFT transactions. EFT transactions for charitable contributions offer individuals who do not have access to payroll deduction—such as professionals and small-business employees—an opportunity to contribute more to their communities by spreading their contributions over several months.

The development of the "smart card"—essentially a credit card with a microprocessor chip—will enable people to transfer funds at the "point of sale," e.g., when making a purchase in a store, or when making a charitable contribution.

Technology-Induced Occupational Changes

Current and future technologies will spawn new industries and create new kinds of jobs. But between now and the year 2000, technology's main impact will be to change the way today's jobs are accomplished. All categories of workers will be affected. White-collar workers, including clerical, supervisory, and administrative, who simply pass along information without adding value to a finished product may lose their jobs. (One large employer expects to dispense with its entire clerical and secretarial staffs by 1995.)

Futurists predict that clerical workers whose skills are limited to data entry will begin to be displaced in the mid-1990s, as more sophisticated technology requires fewer, but more highly skilled, workers. Secretaries will cease to be personal assistants and instead will become information managers who coordinate the flow of information among staff and choose the appropriate software for processing final documents. More managers and professionals will be processing their own work on their computers, potentially reducing the amount of paper-handling between clerical and professional staff.

Managers who gather and process data rather than make decisions will also be targets for displacement. Their work will be done by information systems or by lower-level staff. The prized manager of the future will be someone who is not only comfortable with spreadsheets but who also has a strong intuitive side. He or she will be people-oriented, skillful at motivating others, able to function comfortably in a variety of staff networks, and able to focus on relationships among staff. This style of managing, rather than a top-down, directive style, will better suit the demands of the technological workplace.

Professionals—such as lawyers and accountants, but also members of newer professions such as computer experts—will also be affected by advances in computer technology. Although professionals are valued for their expertise, the further development of expert systems will challenge their monopoly on specialized information. Professionals' knowledge can be transferred to computer systems that paraprofessionals can then use to handle routine matters. Their specialties will thus become more fully a part of the organization-wide knowledge base instead of residing with selected individuals.

In place of the professional who specializes in a single field, some experts see a new elite "gold-collar" worker emerging: the highly educated generalist. This type of worker will know how to integrate information from several fields—such as engineering and economics—and to use advanced software to meet an organization's vastly increased needs for information.

Manufacturing workers will continue to face sporadic employment and recurrent layoffs. Tougher international competition is already causing firms to make frequent changes in the amount and kind of products they make, subjecting manufacturing employment to cycles of layoffs and recalls. In the 1990s, that instability is expected to gain momentum, as factories and mills slowly but steadily automate. Automation will change the kinds of skills needed in the workplace, and workers who lack or cannot acquire these skills will have difficulty holding a job. Over the long run, therefore, although manufacturing output is increasing in the United States, manufacturing employment is expected to hold steady or decline slightly as a proportion of the labor force.

Both manufacturing and service jobs that are low-skilled will be less directly affected by technological change, but even some low-skilled jobs will increasingly require workers to have higher-order analytical skills to use computers. For example, assembly-line workers in some plants are learning statistical process control, using computers to monitor the quality of work produced on an assembly line.

The training of disadvantaged workers in new technologies will be a key element in reducing unemployment and avoiding large-scale worker shortages. The reason is that, in the future, not only will the work force grow more slowly, but it will also be proportionately more disadvantaged, that is, less likely to have the work and life skills needed for the jobs that will exist. Yet this at-risk generation will be the one to master tomorrow's technology, and their success or failure will strongly influence the economic future of the United States.

New technologies are also going to create new industries. And some futurists estimate that new industries made possible by technological advances will create an estimated 10.5 million new white-collar jobs in the next 10 years. One such new industry is desktop publishing, which is already beginning to achieve wide use. Also called computer-assisted publishing, these systems consist of a personal computer, a laser printer, and publishing-software packages. They combine design, layout, and typesetting in one operation, substantially reducing production costs. Desktop publishing can produce newsletters, posters, and full-length books. This development is changing the publishing industry by creating new jobs while eliminating old ones.

Effect on the Workplace

New technologies will expand the options for telecommuting—working from home on a personal computer either full- or part-time. Workers will be able to take their work home on the weekends, work at home when a child is ill, or work at home on a regular, if not full-time, basis. By the year 2000, up to 50 percent of the American work force could work at home at least some of the time. Telecommuting can give workers, particularly those in two-career families, more control over their time while also increasing their productivity.

Working at home, though, has disadvantages. Being out of the office can stunt a worker's career growth. At-home workers also lose the opportunities to socialize with co-workers. And managers are often reluctant to lose day-to-day supervisory control over workers. In addition, studies of home-based work suggest that it may be several generations before the motives, attitudes, and relationships of workers and their families are fully attuned to balancing work and home life under one roof.

Workplace computerization may be accelerating the erosion of traditional corporate loyalty. Rather than the "company man (or woman)" whose first loyalty is to the organization, the organizational heroes of the future may be the "information elite," those workers who are highly skilled in accessing the organization's vast information resources and using those resources to solve problems. Some futurists caution that this could produce a subtle shift from loyalty to a specific company to loyalty to one's own professional skills and knowledge, because it is these skills and knowledge, more than the company one works for, that will shape a worker's career.

In addition, as more work can be accomplished outside the traditional workplace, loyalty to place is expected to decline. The structure of work will become more a state of mind than a state of place, in one expert's words, as networks of employees in different locations work together on projects. Some observers go so far as to call this changing relationship between the worker and the company the beginning of the downfall of bureaucracy, as technology erodes hierarchies in favor of networks of peers.

TREND 8: EMPLOYMENT PROSPECTS

The changing economy will create an unstable employment picture for many workers.

The experiences of looking for and holding a job have undergone significant changes during the 1980s. The replacement of old lines of work with new ones and the general shift of employment to the service sector have complicated the process of selecting and training for a career. And this has wreaked havoc on the tradition of a stable career and steadily increasing earnings.

In the 1990s, most new jobs will come from the service sector. They will be added at a slower rate than in the recent past, however, largely because there will be fewer young workers available.

In addition, unemployment and joblessness are likely to remain problems for unskilled workers, particularly for disadvantaged workers.

Changing Employment Prospects

Overall Employment Growth Is Slowing. The nation's projected annual increase in employment (1.3 percent) is about half the average annual rate of increase the United States enjoyed between 1972 and 1986. The main reason for the slower rate of growth in employment through the year 2000 is that the work force itself is expected to grow more slowly during this time than it has in the past. The rapid increases in the past were the result of the huge baby boom generation (born between 1946 and 1964) entering the labor force, accompanied by a rapid increase in the labor force participation rate of women. The recent slowdown and that projected for the remainder of the century reflect the entry into the work force of the smaller baby bust generation (born between 1965 and 1976), as well as a slowing of the growth in women's labor force participation rate.

Still, the U.S. economy is expected to add more than 21 million jobs during the remainder of the century—mostly in the service sector. Most of the jobs that will exist in the year 2000 will be the same jobs that exist today, and most job openings between now and 2000 will come from turnover in established occupations. But getting and keeping even today's jobs will require workers to keep up-to-date on new technologies because, in general, the skill requirements of these same jobs will be greater in the future.

Nearly All New Jobs Are In Services. Nine out of ten new jobs added over the remainder of the century will be added in the service sector. The occupational areas in which the number of jobs will grow most quickly are expected to be the professional, technical, and sales fields areas. These are fields which generally require high levels of education and skill. By contrast, the occupational areas which will grow most slowly are those which generally require the least education, such as administrative support workers, and laborers. Employment losses will occur among the farming and forestry fields, as well as among private household workers.

Service-Producing Industries

The service-producing sector will expand by nearly 20 million jobs between 1986 and 2000, growing from 57.7 million jobs to 76.1 million jobs. Nearly 80 percent of the nation's wage and salary workers in the year 2000 will be employed in the service-producing sector, up from 75 percent in 1986 and 68 percent in 1972. (Note: Wage and salary workers includes all workers in the U.S. employed in the goods-producing and service-producing sectors; i.e., it does *not* include those employed in agriculture, those employed in private households, or those who are self-employed.) The highest concentration of job growth will be in health care and business services (work contracted out by companies). Large employment growth (6 million new jobs)

Where the New Jobs Will Be 1986 - 2000

Data: U.S. Bureau of Labor Statistics, 1987

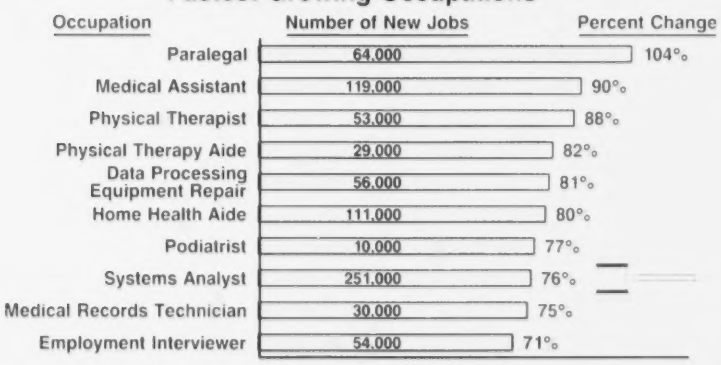
is projected for wholesale and retail trade. This growth in employment parallels the growth of these industries, which are currently expanding at the same pace as, or at a slightly faster pace than, the economy as a whole. Finance, insurance, and real estate (FIRE) industries are projected to add over 1.6 million jobs, a slower rate of growth than in previous years. Much of the FIRE growth will occur in existing small firms and newly created companies. Transportation, communications, and public utilities are expected to grow at a slightly faster rate between 1986 and 2000 than in the first half of the 1980s (but slower than that between 1972 and 1986). Almost half a million jobs will be added in these three industries with transportation accounting for 97 percent of the growth.

Services. Employment in services—including hotels, personal services, business services, amusement and recreation services, health services, legal services, educational services, and social, membership, and miscellaneous services—will account for 10 million of the 20 million new jobs in the service-producing sector. The average annual growth rate will slow to 2.7 percent, down from over 4 percent in the 1970s and 1980s. Over 27 percent of all wage and salary jobs will be in services, up from 23 percent in 1986 and 16 percent in 1972.

Over two-thirds of the new jobs in services will be in only two areas: business services and health services. Business services will account for more than one-third of the 10 million new jobs, with computer and data processing services enjoying the fastest growth rate (5.5 percent annually, for an addition of 612,000 jobs). Personnel supply services, growing at a slightly slower annual rate (4.4 percent) than computer services, will add the greatest number of new jobs in business services: 834,000. Health services will account for one-third of the growth in services, adding over 3 million jobs. Among health services, outpatient facilities and health services will experience the fastest annual growth rate—4.6 percent—and will add over one-half million jobs. Offices of health practitioners will add the most new jobs in health services—1.4 million—despite the slightly slower annual growth rate (4.4 percent).

Where the New Jobs Will Be 1986 - 2000

Fastest Growing Occupations



Data: U.S. Bureau of Labor Statistics, 1987

Government. State and local government employment will see little expansion through the year 2000. As for federal employment, as a whole it is expected to remain relatively stable. Overall, the number of local, state, and federal government employees will continue to rise slowly. From a level of 16.2 million in 1980, the number of government workers rose to 16.7 million in 1986, and is projected to rise to 18.3 million by 2000. Over 15 percent of America's wage and salary workers will be employed in government in the year 2000, a decline in share from that of 1986 (17 percent) and 1972 (18 percent).

Goods-Producing Industries

The goods-producing sector is projected to experience no net change in employment because declines in the manufacturing and mining industries will be offset by increases in the construction industry. Twenty-one percent of all wage and salary workers in America will be employed in the goods-producing sector in the year 2000. This represents a continuation of a long-term trend of decline in share of employment. In 1986, 25 percent of all wage and salary workers were in the goods-producing sector, down from over 32 percent in 1972.

Manufacturing. Employment in some manufacturing industries, such as printing and publishing, drugs and pharmaceutical products, computers and office equipment, and instruments and related products (such as optical instruments, medical instruments, engineering and scientific instruments) is expected to grow. However, between 1986 and 2000, overall employment in manufacturing is expected to decline by more than 800,000 jobs

from approximately 19 million to just under 18.2 million, employing about 15 percent of the wage and salary work force. This decline is projected despite the fact that manufacturing output is projected to increase 2.3 percent annually through the year 2000. (In 1972, by comparison, manufacturing provided over 19 million jobs and employed 26 percent of the wage and salary work force.) However, economists from the Brookings Institution and the Economic Policy Institute are challenging these projections. They claim that the U.S. industrial base has been eroding and that manufacturing's share of employment is falling, not only because of more efficient production processes and greater use of robots in U.S. factories but also because the United States is actually losing manufacturing output. If these economists are correct, manufacturing's share of employment will fall even further in the future than is currently projected.

As some manufacturing jobs are eliminated, however, others may arise—but in different regions of the country (the majority of new manufacturing jobs are in the Southeast and West regions). Many of the newly created jobs will require new skills, so experienced workers will have little or no edge over trainees. And new employees of goods-producing industries can expect less pay than their unionized predecessors.

In addition, the 18.2 million manufacturing jobs in the year 2000 will be very different from those of the present. In general, manufacturing employment is expected to shift away from production and assembly-line jobs toward professional, managerial, and technical occupations. Despite the projected net loss of jobs in the manufacturing sector, there will be 258,000 additional engineering, scientific, and technical positions and 85,000 more managerial jobs within the manufacturing sector.

The manufacturing industries expected to decline in employment are mostly those that have experienced job losses for years, such as the large steel and auto makers.

Construction and Mining. Among the other goods-producing industries, only construction is expected to grow, adding almost 900,000 jobs. Employment in mining is projected to fall by 59,000 jobs, a slowing of the decline experienced in the first half of the 1980s.

Agriculture

Some experts expect an increase in new agricultural jobs, but this will be offset by a decline in the number of self-employed farmers, causing a net loss of jobs in this sector. In 1980, 3.4 million agricultural workers were employed; by 1986, their numbers had declined to 3.3 million, and they are expected to decline further to 2.9 million by the year 2000. Agriculture is projected to employ 2.2 percent of American workers, down from 2.9 percent in 1986 and 4.2 percent in 1972.

Other Industries

Private Household Workers. Employment for private household workers is projected to decline slightly through the year 2000, for a total loss of 26,000 jobs. The rate of decline represents a slowing of the decline experienced in the early 1980s, and is much slower than that experienced between 1970 and 1980 (–0.1 percent annually between 1986 and 2000, versus –3.4 percent between 1972 and 1979). Private household workers will comprise less than 1 percent of the total work force in the year 2000 (down from 1.1 percent in 1986 and 2 percent in 1972).

Self-Employed (Nonfarm) and Unpaid Family Workers. Through the close of this century, there will be a slight decline in the annual growth rate of self-employed (nonfarm) workers and unpaid family workers. Almost 1.7 million jobs will be added in this sector between 1986 and 2000, but this is down from the 2.3 million added between 1972 and 1986. Nevertheless, workers in this sector will account for 7.3 percent of the total work force in the year 2000, up from 7.2 percent in 1986 and 6.9 percent in 1972.

Changing Employment Conditions

The Disappearing Career Ladder. As careers and occupations respond to economic and technological changes, worker displacement through job elimination will be a continuing feature of the 1990s. This instability is already altering the fundamental employer-employee relationship. Employers can no longer offer

employees a defined "career path," because external forces are continually changing U.S. firms, creating new jobs, and eliminating old ones. Partly as a result of this, managers and professionals are expected to place more stock in their own marketable skills than in their company in order to build their careers. In the future, the attention and loyalty once reserved for the company may well be transferred to professional associations and professional disciplines.

The future employment picture for displaced workers will be characterized, therefore, by increasing instability. Many displaced workers will go to work in the service sector—mostly in small firms where benefits and job security are generally poorer than they were in the larger firms from which many of these workers were displaced. Also, small firms are by nature more affected by ups and downs in business; workers in these firms have a higher turnover rate and are far less likely to have lifetime employment opportunities. Already, one worker in five changes jobs each year, and one in ten changes careers. This pattern is not likely to change. Few career paths will be secure, because few firms can see ahead more than a few years to know what business they will be in, or if they will even be in business.

In addition, workers want different rewards from their jobs. Employees increasingly want to be treated as individuals and not as cogs. They want to be treated well and have the opportunity to use their own skills. This emphasis on personal satisfaction may stem from the fact that fewer future workers will have an opportunity for promotion or for attaining positions of power. Moreover, the differences in status between managerial and operational work are increasing as job roles are being reorganized. In fact, some observers predict that the number of white-collar workers who seek union membership will rise sharply in the 1990s as changes in job roles weaken the white-collar worker's traditional identification with management. Potential union issues include worker privacy, job security, and health hazards from computer use.

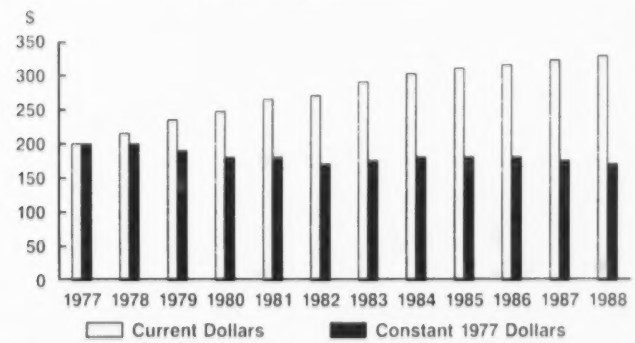
A Flexible Work Force

America's economy demands a "high-flex" work force, one that can adapt more quickly to change. While some of the responsibility for becoming more versatile rests with the individual, a part belongs to society. Various observers have called for institutional reforms such as the following to help workers make job and career changes more easily: (1) pension portability, or the ability to carry pension benefits from one job to another; (2) changes in the unemployment insurance system so that it offers financial assistance for retraining or starting a new business; (3) the development of Individual Training Accounts (ITAs), similar to Individual Retirement Accounts, which would allow a worker to save tax-deductible dollars for future training needs; (4) an upgrading in the quality of training for adults, including greater use of computer-based instructional systems; and (5) better information systems that help workers discover emerging fields of job opportunity and locate appropriate training.

The Future of Employment Wages. By the year 2000, households headed by individuals in the 35-to-50 age group will include 120 million people, close to 45 percent of the nation's population. Traditionally, Americans expect earnings to grow rapidly after age 30 and reach a peak approaching 50. However, that pattern appears to be changing: real wages (adjusted for inflation) have been declining. Workers who turned 50 in 1963 were earning an average of 54 percent more than what they had earned at age 40. Those who turned 50 in 1973 were earning just 29 percent more than they had earned at 40. But for workers who turned 50 in 1983, real earnings had actually declined by 14 percent over the previous decade, reversing a long-standing trend.

Real Average Weekly Earnings Falling

10% Drop Since 1977



Source: The Conference Board, 1988

Despite the decline in real earnings, the number of households headed by persons in the 35-to-50 age group with incomes of $50,000 or more (in 1985 dollars) is expected to almost triple by 2000—largely an effect of the two-income couple, but also a result simply of the huge size of the baby boom generation. However, only 5 percent of baby boom adults earn over $35,000 per year; by contrast, 42 percent earn under $10,000.

Workers have maintained their standard of living by moonlighting, adding a second family income, going more deeply into debt, or a combination of these. In addition, nonwage sources of income (investments and government transfer payments) make up a larger share of personal income now than in the past.

The Unemployed and Nonworkers

In mid-1988, the national unemployment rate fell below 5.5 percent, the lowest it had been in 14 years. Likewise for the first time in many years, pockets of labor shortages developed, particularly for skilled machinists, laborers, and entry-level workers. However, the low overall unemployment rate masks unemployment's uneven impact by race, age, and region. The unemployment rate for black teenagers in mid-1988 was more than 40 percent. For adult black men, it was 12 percent, and for all Hispanics, 8 percent. Regional variation is also significant. For example, a sizable number of laborers from West Virginia (where unemployment is over 13 percent) have moved to the Washington, D.C., area, which has a labor shortage. Although the West Virginians have been able to find jobs, the high cost of housing in Washington has forced many to live in tent camps.

Not counted among the 9 million unemployed because they are not actively seeking work, or able to find work for only part of the year, are America's jobless. An estimated 10 to 20 million Americans in their prime working years are remaining outside the work force.

Although there have been other periods of high joblessness in American history, the current situation is different: the magnet of unfilled jobs is failing to exert its usual pull. One reason is that many of the newly created jobs are in the suburbs, whereas many of the jobless live in the cities and the public transportation that would enable them to get to and from work is inadequate. And many of the jobless lack the skills to compete in today's job market. For the millions of nonworkers and marginal workers who are among the more than 20 million people living in poverty in the United States, other obstacles to employment are poor health and lack of child care.

Thus, the United States now has a hard core of people known as "nonworkers." A diverse group, the nonworkers include 6 million people who want to work but are not looking because they do not think they can find a job. Nonworkers also include displaced workers, many of whom may be able to find jobs but are discouraged by the prospect of a lower salary. The largest group of nonworkers—marginal workers—work, but only for part of the year, and they are concentrated in very low-paying jobs. Marginal workers are the "statistically invisible"—too discouraged by low wages to be more than marginally attached to the job market.

Higher wages might help bring these nonworkers back into the system. However, with job growth in the American economy dominated by the service industries—and greatest among retail, restaurant and food industry workers, maintenance people, and hospital attendants—the jobs most available to these hard-core nonworkers are decidedly low-income. In addition, many business executives and economists warn that wage levels for those positions cannot go higher, because of low productivity, stiff competition, and the possibility of a recession.

TRENDS WORTH WATCHING

In addition to the eight major trends just discussed, United Way of America's Environmental Scan Committee chose four trends that bear watching because of their potential impact on the world of work in the long term. These "trends worth watching" are AIDS, worker privacy, the medically indigent, and the work-force participation of older workers.

AIDS

The AIDS virus will continue to affect increasing numbers of Americans, transforming the workplaces of the nation.

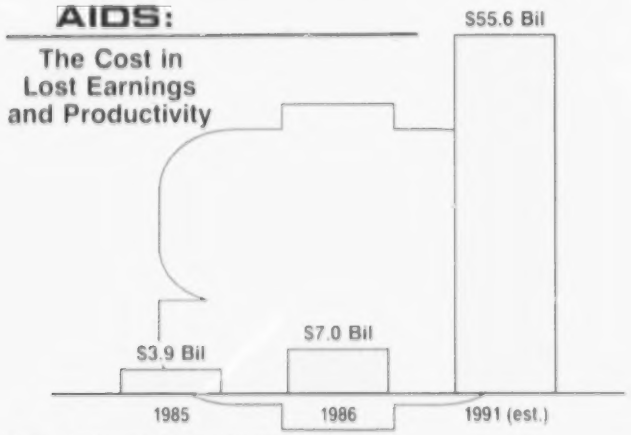
Many medical experts consider Acquired Immune Deficiency Syndrome (AIDS)—a fatal viral disease that attacks the body's immune system, leaving patients vulnerable to numerous other infections—to be the gravest public health threat of the century. The National Center for Health Statistics predicts that AIDS will be one of the ten leading causes of death by 1991 (in 1986 it was not in the top ten) and that it will be the leading cause of death for people aged 25 to 44.

Statistics on known cases and deaths are already alarming and are projected to increase. Even more disturbing is the knowledge that an additional 1.5 million to 4 million Americans are thought to be carriers of the human immunodeficiency virus, which causes AIDS. Most Americans infected with this virus are young adults, many of whom are unaware that they are carrying the disease, and the number of those infected is doubling every year or so. It is estimated that all of the carriers will develop AIDS.

The concentration of AIDS deaths among young adults has put added stress on an economic system whose population growth has slowed, and the implications are far-reaching. The cost of providing support—through programs such as unemployment compensation, and food and housing assistance—to those no longer able to work will be a great burden on society. Even more significant will be the costs of health care. Although private health insurance is currently the major source of funding for the medical care of AIDS patients, some AIDS patients have little or no health insurance, and direct medical costs could amount to between $8 billion and $16 billion by 1991.

In addition, the earnings and worker productivity lost because of AIDS-related illness and premature death are projected to total more than $55 billion by 1991. Finally, the loss of social security payments by nonworking AIDS victims further strains the nation's pension system.

Today, businesses must consider a host of AIDS-related issues, including relevant laws (e.g., the right to privacy; discrimination), insurance ramifications, employer-employee relations, and the concerns of workers who do not have the disease. As a result, AIDS is fast becoming an important workplace issue. Although most employers have not as yet developed explicit AIDS-related policies (less than 10 percent have such policies), more may be forced to do so as the number of AIDS cases diagnosed continues to rise.



Source: Environmental Scanning Report 1987-1988, Girl Scouts of the U.S.A., 1987

Worker Privacy

Employees will express increasing concern regarding the realm of worker privacy, especially in light of the increasing use of technology by employers in employee (and job applicant) health testing and worker productivity monitoring.

Workplace privacy is currently one of the hottest employment issues and is likely to continue to be so for the remainder of this century. The explosive rise in the number of suits brought against employers for alleged violations of workers' privacy testifies to the importance of the issue. Employer surveillance of employees is nothing new; what is different today is that technological advances permit new forms of surveillance, not only by computer, but also by blood and urine.

Between 1985 and 1987, 97 verdicts in worker-privacy suits were found against employers (for an average jury award of $316,000), up from only four verdicts between 1981 and 1984 and none between 1979 and 1980. Reasons for the increase are varied but include the growing number of exceptions to the "employment at will" doctrine, which generally protects employers from being held liable for firing a worker; employers' use of technology to monitor workers; and the boom in testing for substance abuse.

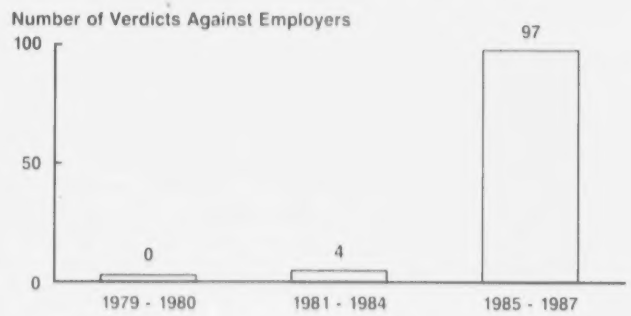
Polygraph testing has also been a subject of suits. It is estimated that 25 percent of all businesses and 60 percent of all retail establishments use polygraph tests. In more than 20 states, concerns about accuracy, the legal liability of employers, and the invasion of workers' privacy have produced tight restrictions on how lie detectors are used.

As American business increasingly uses new technology, privacy problems will probably grow. Currently, about 6 million office workers have their work partly evaluated by computer, and the number is expected to grow. Computers can be used to find out how much time employees spend on the phone, how long they take to do a given project, and even what they say on the phone. Although some of the information gained can be put to positive use in helping the employee perform better, the potential for misuse is obvious.

One of the newest claims of invasion of privacy has centered on genetic testing. The purpose of genetic testing (although it is not yet widespread) is to identify would-be workers who might be considered susceptible to illnesses; if they were identified as susceptible, they might not be hired. Although relatively few companies are now performing genetic tests, many other companies are watching them and may institute such testing in the future. Arguing against more use of genetic testing is the unreliability of many of the available tests, their cost, and the lack of information about their predictive ability over time.

Workers Filing More Privacy Suits

Number of Verdicts Against Employers Rising Sharply



Source: USA Today, September 4, 1987

The Medically Indigent

As increasing numbers of employers reevaluate their health benefits programs for employees, the number of Americans with inadequate health insurance is likely to rise.

Health statistics reveal quite clearly that health costs are consuming an increasing proportion of personal expenditures, corporate expenditures, and public expenditures at all levels. And at the same time that medical costs are soaring, increasing numbers of people are without adequate health insurance.

Some 37 million Americans (almost one out of every six) have no health insurance. Their numbers have increased by 29 million since 1979. The number of uninsured Americans is expected to continue its steady rise. An additional 50 million Americans have inadequate health insurance (their health care policies do not cover major health expenses) and are therefore vulnerable to financial hardship if a catastrophic illness should develop.

Two-thirds of the nation's uninsured are adults, nearly two-thirds of whom are in the labor force. (One-third of the uninsured are children.) Yet 85 percent of these workers make an annual salary of less than $10,000. Few of these low-paid workers can afford to buy individual insurance coverage for their families (more costly than group coverage), and they are not eligible for Medicaid (the federal government program to provide health benefits to the poor, the disabled, the blind, and persons covered by Aid to Families with Dependent Children). Moreover, Medicaid itself is increasingly failing to meet its mandate: it now covers fewer than half of those living in poverty.

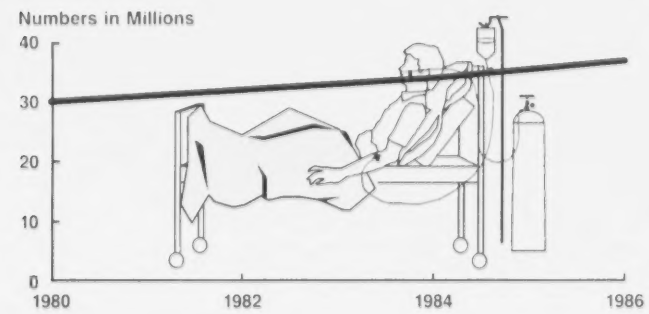
That most of the uninsured are working Americans attests to the facts that fewer employers are providing medical coverage for their employees and that more are shifting a greater burden of medical costs to the employee. This is mainly the result of the rising cost of insurance premiums and the shift from a manufacturing economy to a service-based economy (composed of increasingly greater numbers of smaller businesses, which generally do not provide as comprehensive a benefits package as do larger ones).

And although most medium-size and large companies in the United States provide health insurance to their retirees, many of these companies are increasingly worried about the current costs and future obligation of these promised benefits. If employers choose to limit the coverage provided to retirees—either by eliminating the benefit entirely or by dramatically increasing a retiree's share of the premium—even greater numbers of Americans will find themselves with inadequate health insurance.

Another potential problem is that technology may soon be used as a tool by insurance companies to deny health insurance coverage to Americans who either have been found to have a serious disease or have been deemed susceptible to contracting a serious disease (genetic testing may make it possible to detect preexisting genetic conditions)—much as many AIDS-carriers are denied insurance today. The U.S. Public Health Service's Office of Disease Prevention and Control predicts that most Americans will be getting "genetic profiles" by the year 2000. Although these tests may help people avoid diseases to which they are most susceptible, they could also make many people uninsurable.

37 Million Americans Have No Health Insurance

Additional 50 Million Are Underinsured



Data: The Urban Institute, 1987

Older Workers

Increasing numbers of older Americans will likely choose to remain in the work force after "normal" retirement age.

Realizing that the nation's system of income security is insufficient, many American workers are likely to change their attitudes about retiring, tempering a trend toward early retirement that has been continuing for the last two decades.

Already the attitudes of Americans about working after age 65 are changing. According to a poll commissioned by the National Commission on Social Security, only 31 percent of those surveyed said that they would prefer to retire at the normal age of retirement if their income was adequate—and that is a big if. A 1985 Gallup poll showed that one-third of all retirees aged 55 and over wished they had not retired. Demographers predict that older Americans will increasingly choose some form of work over leisure by the year 2000. Thus, the number of people age 65 and over who will choose to remain in their jobs will probably increase sharply during the next decade.

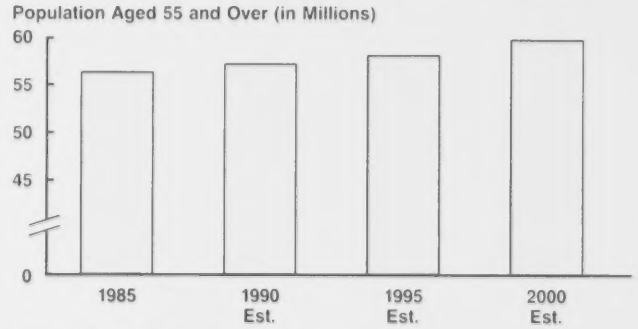
Besides the benefit of extra earnings, physical considerations will play a role in the greater number of people working after age 65. Life expectancy is rising, and general health is better. Older Americans will have fewer physical reasons to reduce their activity. In addition, in many fields, work itself will require little physical exertion, as the move to a service economy (which does not require hard physical labor) continues.

Already the number of young people available to work is dropping and businesses are turning to older workers to help make up the deficiency. Businesses are also turning to retirees to fill seasonal or sporadic labor shortages. These trends are likely to continue.

In late 1986, Congress banned forced retirement at any age and also banned age discrimination in hiring, salary raises, promotions, and layoffs. The Department of Labor estimates that this elimination of mandatory retirement will result in the addition of 196,000 more older workers to the labor force by the year 2000.

Older Americans Are an Untapped Resource for Many Businesses

Growing Number of People Aged 55 and Over



Data: U.S. Bureau of the Census, 1987

AFTERWORD

Two members of United Way of America's Environmental Scan Committee offer alternative ways of looking at the future world of work. Their views appear on the following pages.

- Roy Anderson of Anderson Associates discusses how planning for the future really means accurately perceiving the present.
- Robert B. Wood, director of research and education of the International Brotherhood of Electrical Workers, discusses how important the manufacturing sector is to America's continuing economic growth.

The Current World of Need

Roy Anderson, Anderson Associates

At the recent meeting of the Environmental Scan Committee, I suggested that in five years the report titled *The Future World of Work: Looking Toward the Year 2000* may be viewed in a very different light.

In a nutshell, by 1992 we may be in the process of developing a report with an entirely different focus: a report titled *The Current World of Need.*

Our present report deals with all the factors to which we are now accustomed, such as social, political, and economic trends; demographics; the need for education and training; and so forth. It deals with all the things with which people are familiar, and, what is more, it deals with them in the terms that people are used to using when they identify the myriad problems confronting our changing society.

My point is that our present report does not go far enough. Within the past decade, many "experts" have come to agree that the 200-some years of industrial society are ending. The process of change now sweeping our society, our culture, our civilization is far more profound than is generally recognized. In dealing with the accustomed factors and using the accustomed terms, we are therefore looking backward rather than forward.

Economists and others have suggested several names for the new society that is struggling to be born. We hear of the "service economy" or the "information age" or the "communications/computer age" or even the "high technology" age.

In my view, our pundits are still guessing. It is far to early to tell. More important, the change we are now in the midst of is more profound than even those names suggest. As one of your staff has summarized my views:

In a society evincing symptoms characteristic of transition, such as political and social unrest, economic dislocations, eroding traditional moral values and family structure, increasing hedonism, and loss of faith by the citizenry in the institutions of society, we are all changing what we value, what we believe, and how we think about things.

Let me relate this to *The Future World of Work.* Traditionally, when we have thought about the need for people to sustain themselves through productive effort, we have thought in terms of "jobs" and "work," employment and unemployment figures. But this is putting the cart before the horse. We should not be thinking in terms of the need to create and produce jobs for people, but of the things that are needed that people can create and produce.

I'll cite a personal experience from the Depression of the 1930s. As a child, I was painfully aware that my father and his friends were out of work at times. If things really got rough, they might try the WPA (Work Projects Administration)—the government program for building roads, public buildings, and so forth. But these jobs were usually scorned because the workers doing them had earned a reputation for loafing on the job and stretching out the work as long as possible so as to keep their jobs. In fact, the workers were not to blame; they were acting in the spirit in which the WPA had been established, which was first and foremost to get income into the pockets of people in need.

There were a lot of fine things that were built by the workers of the WPA—but I don't think it ever lost its bad reputation. That's a shame—because so much more could have been accomplished. Maybe even more important, it could have been done with a far greater sense of self-worth by the workers, if the focus from the beginning had been that of building things that met the needs of the nation.

That is why I suggest that the day will come when we will prepare a report focused not on getting jobs and income, but on fulfilling the needs of the nation. It will not be about the needs at some future date, but the needs of the present.

If you travel around this country, you won't have to look far to identify a goodly number of critical needs in this nation. The entire infrastructure is crumbling around us: the streets and roads, the dams and bridges, the railroad roadbeds, the sewers and water conduits. And we need to repair the ravaged ecology and find safe ways of disposing of pollutants, toxic poisons, and nuclear waste. We need to improve our educational system at all levels. And we need to restructure a medical care system that is preoccupied with sickness and with postponing death.

I'll stop at that point, because if there is any organization in this nation whose members are aware of the meaning of "needs," it is the United Way. In fact, I can think of no other organization whose staff is better qualified to put meat on the bones of what I've been saying.

A final point: much of what I've been trying to say is closely related to the forthcoming report. In fact, my sense is that the *The Future World of Work* is really the flip side of *The Current World of Need.*

A Labor Perspective on the Future World of Work

Robert B. Wood, Director, Research and Education
International Brotherhood of Electrical Workers

Having examined how the world of work is changing, it is important to consider how those changes will affect the American people. Changes in the world of work will significantly affect social-service organizations like United Way, and could change their ability to fulfill their role in society.

I am concerned that we are losing our manufacturing base and, with it, our foundation for raising the standard of living of the next generation. And without a rising standard of living, the American Dream is imperiled.

I disagree with those who claim that we can afford to let the manufacturing sector decline in favor of a "service economy." I also disagree with those who maintain that "high tech" alone will keep the U.S. economy strong. In order to produce lasting economic growth, services and technology must be strongly tied to a manufacturing base which includes the full range of manufacturing operations.

There are several ways in which our manufacturing base is eroding. First, many U.S. manufacturing firms are now dependent on foreign sites for supplying parts and for assembling products. This not only costs the U.S. those manufacturing jobs that are moved overseas, but it also deprives the nation of ancillary jobs as well, such as machine repair and construction. Nearly one such job is lost for every manufacturing job that goes overseas.

Second, American corporations are "downsizing" in an attempt to become more competitive. But while contracting out operations (both in the U.S. and overseas) may have short-term benefits, it is weakening American industry in the long run, and hurting its workers.

Third, the growth of foreign ownership of the U.S. industrial base also poses long-term risks to our economic future. Many of these operations are final-assembly, rather than full-scale, operations. That means that U.S. workers who work in them are becoming skilled in only limited areas, rather than in the full range of high-tech manufacturing skills that a full-scale plant would demand. It also means that other jobs are affected: these final-assembly plants require less construction, less electricity, and less transportation services than a full-scale manufacturing plant.

Fourth, I think there is a misplaced reliance on high technology as the solution to our economic problems. New technology is used in manufacturing and service industries to create new processes and products. Without a full range of manufacturing operations, the U.S. economy will not be saved by advanced technology. Rather, lacking a strong manufacturing base, the U.S. will become less and less able to quickly turn technological advances into marketable products.

As Akio Morita, chairman of the Sony Corporation, has observed: "Unless U.S. industry shores up its manufacturing base it could lose everything. . . . American industries have either shifted output to low-wage countries or come to buy parts and assembled products from countries like Japan that can make quality products at low prices. The result is a hollowing of American industry. The U.S. is abandoning its status as an industrial power."[1]

The former head of Ford's European operations, Robert A. Lutz, adds, "You are seeing a substantial deindustrialization of the U.S. and I can't imagine any country maintaining its position in the world without an industrial base."[2]

I would like to go back to my initial concern: what impact will these changes have on the American worker and, ultimately, on the American way of life?

I think we are beginning to see the impact: for working Americans, the standard of living is declining, and for the nation as a whole, income distribution is becoming more bipolar. To the detriment of the middle class, the share of income received by the middle 20 percent of families has declined to the lowest level since 1947. Economist Lester Thurow calls the middle class "an endangered species."[3]

This change is tied directly to changes in American industry. In order to cut costs, employers are reducing the quality of compensation for workers in a number of ways. First, they are shifting a substantial share of the cost of medical care and health insurance to workers. Similarly, the cost of other benefits, such as contributions to pension plans, is being increasingly borne by employees and decreasingly shouldered by employers.

Second, the growth of part-time employment, temporary employment, contract employment, and other configurations of employment is hurting the American worker. In many cases, these kinds of arrangements pay lower wages and lack the benefits of full-time employment. By their very nature, they offer little in the way of job security.

What does this mean for American workers and for organizations such as United Way? When the burden of cost-shifting is coupled with declining real incomes, workers and their families are financially squeezed. This means they will have less and less discretionary income, making them less able to contribute to charities such as United Way. It also means that they will be more vulnerable to economic hardship, and be more likely to have to call on organizations like United Way for help. Charities are being squeezed from both sides.

There are numerous proposals to improve employment practices and trade policies that the International Brotherhood of Electrical Workers and the rest of organized labor are supporting to help the U.S. worker. But it should be clearly recognized that my concern here is not just for the livelihood of a limited number of manufacturing workers. Rather, I am concerned about the standard of living of the nation as a whole, and for the future our children will inherit.

---

[1] "The Hollow Corporation," *Business Week*, March 3, 1986.
[2] "Even American Know-How Is Headed Abroad," *Business Week*, March 3, 1988.
[3] Lester Thurow, *The Zero-Sum Society*.

APPENDICES

APPENDIX A
ENVIRONMENTAL SCAN COMMITTEE

United Way of America Environmental Scan Committee

William C. Ashley, Chairman

John D. Abel, Ph.D.
Executive Vice President
Operations
National Association of Broadcasters

Walter A. Albers, Jr., Ph.D.
Operating Sciences Department
General Motors Research Lab

Roy R. Anderson
President
Anderson Associates

William C. Ashley
President
Ashley and Associates

Renee Bazile-Jones
Senior Consultant
Burson-Marsteller

Mylle Bell
Director
Corporate Planning and Development
BellSouth Corporation

Clement Bezold, Ph.D.
Executive Director
Institute for Alternative Futures

Timothy Biggs
Senior Public Issues Analyst
Prudential Insurance Company of America

Arnold Brown
Chairman
Weiner, Edrich & Brown, Inc.

Niels Christiansen, Ph.D.
Director, Strategic Research
American Council of Life Insurance

Warren Cikins
Senior Staff
Center for Public Policy Education
The Brookings Institution

Sharon M. Cohen
Senior Associate
The Futures Group

Diane Colasanto, Ph.D.
Chief Methodologist
The Gallup Organization, Inc.

R. Morton Darrow, Ph.D.
President
Darrow Associates

Raymond P. Ewing
Director and Associate Professor
Master's Program in Corporate Public Relations
The Medill School of Journalism
Northwestern University

Phillip Halstead
President
Halstead Associates

George W. Handy
Director, Long Range Assessments, Studies and Requirements
United Technologies

Mary B. Heaton
State Issues Manager
Chemical Manufacturing Association

Lincoln Hoewing
Director, Stakeholder Matters
Bell Atlantic

Bruce G. Humphrey
Assistant to the President, Strategic Planning
Edison Electric Institute

Russell M. Jaffe, M.D., Ph.D.
Director
Health Studies Collegium

Wayne C. Johnson
Manager, Administration
Raytheon Company

William D. Kelleher
Manager, Community Resources Section
Resources Policy Department
U.S. Chamber of Commerce

Dennis Little
Office of Strategic Planning
Social Security Administration

Lena Lupica
President
Early Signals

Alfred F. Lynch
Director of Planning and Research
J. C. Penney Company, Inc.

Karen D. Lynn
Assistant Director of Planning
Council on Foundations

Michael J. McCabe
Vice President
Allstate Insurance Company

Daniel Matthews
Consultant
Madison Management Company

Professor James L. Morrison
School of Education
The University of North Carolina
at Chapel Hill

Stewart E. Nazzaro
Manager, Industrial Relations
Operational Planning and Research
General Electric Company

Ralph L. Neubert
Chairman
Coldwell Banker Hallmark Realty

John K. Parker
Distinguished Visiting Professor
Center for Public Policy
California State University

Kenneth Primozic
Management Consultant
Strategic Planning
IBM

Peter A. Rabinowitz
President
PAR Associates

R. Ray Randlett
Director
Public Policy Issues
Allied Corporation

William L. Renfro
President
Policy Analysis Co., Inc.

Nancy A. Risser
President
Risser and Associates

James G. Rothweiler
District Manager
Bellcore

Dolores Schatz
Director, Strategy and Direction
NYNEX Corporation

Margaret C. Simms
Deputy Director of Research
The Joint Center for Political Studies

James Smith
Manager, Business Environment
Scanning and Monitoring
Business Intelligence
SRI International

Howard F. Sohn, Ph.D.
Director, Employee Communication
Pfizer, Inc.

Ian H. Wilson
Senior Management Consultant
SRI Institute

Robert B. Wood
Director, Research and Education
International Brotherhood of
Electrical Workers

Ben Woodhouse
Communications Department
Dow Chemical, USA

United Way of America Staff Support
George W. Wilkinson, Ed.D.
Vice President
Strategic Planning and Markets

Linda J. Forbes
Consultant
Strategic Planning and Markets

Lu Anne Fischman
Manager, Environmental Analysis
Strategic Planning and Markets

Susan Kuhn
Associate, Environmental Analysis
Strategic Planning and Markets

APPENDIX B
ISSUES IDENTIFICATION PROCESS

At its April 1987 meeting, the United Way of America Environmental Scan Committee identified 43 work-related environmental trends and events that will be important to United Ways during the next 10 years. The committee addressed trends and events by filling out a questionnaire (total number of questionnaires distributed: 36). Members ranked each of the 43 trends and events on (1) probability of its developing into a major issue for United Way; (2) impact on United Way, should the trend or event become a major issue; and, (3) time frame needed for each issue to mature sufficiently to require significant resources for its management. Probability and impact rankings were on a scale from 0 (highly improbable, negligible impact) to 10 (highly probable, major structural change). Time-frame rankings were 0—issue has passed, 1—near term (1987–88), 2—medium term (1989–91), and 3—long term (1992–96).

Thirty committee members responded to the questionnaire. Responses were analyzed with Delphi Decision Support System software, developed by the Policy Analysis Company, Inc., 1090 Vermont Avenue, N.W., Suite 927, Washington, D.C. 20005. This software was used to rank responses according to the frequency and degree of consensus among respondents. Table 1 illustrates the rankings of each trend or event for probability, impact, time frame, and probability and impact combined.

Two trends ranked highest on the questionnaire on probability and impact combined. These were:

Rank 1: Increasing growth and greater workplace impact of family and personal concerns, such as drugs, alcohol, smoking, stress, and care of family members (children and elderly).

Rank 1: Greater proportion of work force employed in small and medium-sized businesses.

"Personal concerns" ranked slightly higher on probability of development into a major issue for United Way, while "more employment in smaller businesses" ranked slightly higher on impact. Respondents believe both of these trends will mature enough to require significant resources for management late in 1988. The scores for respondent consensus—the agreement among committee members on the ranking they assigned—were very high on these two items. The "personal concerns" item had the highest consensus score of all the trends listed.

The trend that received the lowest combined probability and impact scores was "'Publicization' of some traditionally private-sector businesses."

Of the trends ranked 3–14, two had strong consensus among respondents: "Growing impact of corporate restructuring" and "Growing importance of the international marketplace." The least consensus was on "Growth in offshore work force" and "Declining corporate loyalty." Respondents agreed that the trend with the strongest impact on United Way was "More corporate downsizing and more outsourcing." The trends with the weakest impact on United Way were "Growing importance of job retraining," "More foreign ownership," and "Growing impact of communication networks."

The Environmental Scan Committee reviewed the results of the questionnaire in October 1987. The committee also reviewed preliminary reports on these trends drafted by United Way of America staff. On the basis of committee study and recommendations, the committee combined these trends and events into eight broad "world of work" issues that they regard as important for the future of United Ways. These issues are the main subject of this report. They are as follows:

- Personal and Family Concerns
- Underused Groups
- Education, Training, and Retraining
- The Corporate Environment
- Small Business
- The Global Marketplace
- Automation
- Employment Prospects

The committee also noted that certain other trends bear watching because of their growing impact on the world of work. These trends are: AIDS, worker privacy, the medically indigent, and older workers. These trends are briefly discussed in this report, as well.

Table 1
RANKINGS OF TRENDS

Rank	Trend	Probability Plus Impact (0-20)	Probability (a) (0-10)	Impact (b) (0-10)	Time Frame (c) (0-3)
1	Increasing growth and greater workplace impact of family and personal concerns, such as drugs, alcohol, smoking, stress, and care of family members (children and elderly). (Number 1 in original survey)	15.5	8.8	6.7	1
1	Greater proportion of work force employed in small and medium-sized businesses. (5)	15.5	8.3	7.2	1
3	Growing impact of corporate restructuring. (38)	14.4	8.0	6.4	1
4	Growing importance of international marketplace. (31)	14.2	9.0	5.2	1
5	More corporate downsizing and more outsourcing, including hiring released staff back as contractors. (34)	14.1	7.7	6.4	1
6	More automation/robotization/ computerization of workplace; greater impact of technology on clerical work force. (29)	13.8	8.3	5.5	2
7	Growing importance of job retraining. (12)	13.7	8.2	5.5	1
8	Growth in offshore work force, including service workers. More U.S. corporate "shells" with production offshore but marketing here. (4)	13.5	7.0	6.5	1
9	Greater use of previously "underused" groups in the work force, such as handicapped, minorities, and women. (11)	13.4	7.2	6.2	1

RANKINGS OF TRENDS

Rank	Trend	Probability Plus Impact (0-20)	Probability (a) (0-10)	Impact (b) (0-10)	Time Frame (c) (0-3)
9	Growing impact/conflict of work and home demands among both men and women, including stress syndrome among "superwomen" and single-parent fathers. (20)	13.4	7.5	5.9	2
11	More foreign ownership and introduction of foreign management practices and values to the U.S. work force. (16)	13.0	7.3	5.7	2
11	More immigrants in the work force. (10)	13.0	7.5	5.5	1
13	Declining corporate loyalty among workers. (33)	12.4	6.7	5.7	1
14	Growing impact of communications networks. (35)	12.1	7.7	4.4	1
15	Continued decline of unions. (39)	12.0	6.8	5.2	1
16	Growing labor scarcity, first among unskilled entry-level workers and then among skilled workers. Resultant competition for workers among industry, academia, the military. (25)	11.8	7.1	4.7	2
17	Reentry of retirees into the work force. (24)	11.7	6.8	4.9	2
17	Growth of cottage industries and attendant legal and insurance-related concerns. (15)	11.7	6.0	5.7	2
19	Increasing decline in workers' educational attainment. (8)	11.6	5.9	5.7	1
20	Worldwide labor surplus in lesser-developed countries. (28)	11.5	7.8	3.7	1
21	Growth in suburban jobs. (22)	11.4	7.2	4.2	1

RANKINGS OF TRENDS

Rank	Trend	Probability Plus Impact (0-20)	Probability (a) (0-10)	Impact (b) (0-10)	Time Frame (c) (0-3)
22	Growing demand for pay equity by women; continuation of the comparable-worth issue. (18)	11.3	7.2	4.1	1
22	Growing invasion of employee privacy, e.g., drug and genetic testing, information files on employees. (6)	11.3	7.3	4.0	1
22	Growing conflict over pension funds and ownership of pension dollars. (36)	11.3	7.2	4.1	1
25	Growing importance of workplace safety concerns, including air quality, and concerns about long-term effects of toxic substances, radiation. (13)	11.2	7.3	3.9	1
25	Growing conflict in the workplace among minority groups: Asians, Blacks, and Hispanics. (2)	11.2	5.9	5.3	2
25	Developing two-tier wage structure. (9)	11.2	6.0	5.2	1
28	Government-mandated health-care benefits provided by employers. (14)	11.1	6.0	5.1	2
29	More postponed retirements. (17)	10.7	6.1	4.6	2
30	Elimination of middle management. (43)	10.6	4.5	6.1	1
30	Growing privatization of public services. (7)	10.6	5.9	4.7	1
32	Impact of immigration bill: loss of employees in low-wage jobs; companies relocating south of the border (and environmental impact on U.S. of pollution from these relocated factories); impact on Mexican economy. (27)	10.5	6.0	4.5	1

RANKINGS OF TRENDS

Rank	Trend	Probability Plus Impact (0-20)	Probability (a) (0-10)	Impact (b) (0-10)	Time Frame (c) (0-3)
33	Greater control of workers, e.g., use of computers to measure productivity. (30)	10.4	6.9	3.5	2
34	Shifting workplace, from office to home, car, and airplane. (21)	10.3	5.5	4.8	2
35	Increasing use of shared office facilities, including support services. (23)	10.2	6.5	3.7	2
35	Weakening corporate values: more lying and cheating; insider trading; less corporate responsibility toward employees (e.g., short time of announcement of plant closings; no outplacement services). (3)	10.2	5.0	5.2	1
37	Introduction of "new management" styles: less hierarchical, more collegial. (37)	9.6	5.4	4.2	2
38	Decline of work ethic among workers. (32)	9.1	4.7	4.4	1
39	Development of shortened work week. (19)	8.7	4.7	4.0	2
40	Increase of terrorism, especially aimed at companies supporting the national infrastructure (telephone, gas, water, electricity). (26)	8.1	5.0	3.1	2
41	Reemergence of unions as a powerful force, especially among white-collar workers. (40)	7.9	3.8	4.1	1
42	Growth in industrial espionage. (41)	7.7	5.3	2.4	1
43	"Publicization" of some traditionally private-sector businesses. (42)	6.3	2.7	3.6	2

FOOTNOTES FOR TABLE 1

(a) Committee members scored each topic on a scale of 1-10 as to the *probability* that it would develop into a major issue for United Way. Their responses were averaged to obtain a probability score.

(b) Committee members scored each topic on a scale of 1-10 as to the degree of *impact* the developed issue would have on United Way.

(c) Committee members scored each topic as to the *time frame* during which they estimated the issue would mature sufficiently to require significant United Way resources for its analysis, management, or both. The scale used was 0—Issue Has Passed, 1—Near Term (1987-88), 2—Medium Term (1989-91), and 3—Long Term (1992-96).

APPENDIX C
ADDITIONAL RESOURCES

The United Way of America resources listed below may be helpful for assessing workplace trends and adopting appropriate strategies. The publications can be obtained from United Way of America's Sales Service Department. The software, excluding Second Century Management System, can be obtained from United Way of America's Marketing Consultation and Research Services Division. Second Century Management System is available from United Way of America's Information Services and Technology Division.

PUBLICATIONS

Competitive Marketing: A Guide for Nonprofits
A guide to help United Ways and other nonprofits understand what marketing is and how to initiate marketing in their own organizations.

Local Business and Its Importance in the Future of United Way Fund Raising: A Case for Increased Attention
Provides (a) information on the personality traits of the local business owner and entrepreneur, (b) basic data on the growth of local businesses, (c) survey findings of attitudes among local business owners, and (d) current strategies used by United Ways to penetrate the local business market.

Needs Assessment: The State of the Art—A Guide for Planners, Managers, and Funders of Health and Human-Care Services
A practical and comprehensive guide for conducting research on community needs. Summarizes current research and materials.

Strategic Management and United Way
Series of eight booklets that explain how to develop and implement a strategic management program, ranging from guidance on performing a local environmental analysis and organizational assessment to guidance on implementing a strategic plan.

United Way at Work in Action
Describes current United Way at Work programs and provides guidance on developing and implementing United Way at Work programs.

What Lies Ahead—Looking Toward the '90s
The fourth in a continuing series of environmental scan reports: examines developing and emerging social, economic, political, technological, and philanthropic trends through 1995.

SOFTWARE PACKAGES

Main Street
Contains a demographic database of population characteristics (age, income, education, mobility, occupation, etc.) for 297 United Way service areas.

Market Place
Provides business profiles of 297 United Way service areas. Data on business establishments in 15 trade groupings, segmented by size of firm and payroll.

PROJECT FLAGSHIP®
Enables United Ways to develop local databases on human services in their communities. Designed to allow United Ways and their funded agencies to automate and standardize their allocations and planning information. United Way of America collects data from participating communities to build a national database of human-service agencies.

Quest
Enables United Ways to conduct their own market research. Includes a standard questionnaire designed to identify attitudes toward United Way.

Quest II
Helps United Ways research untapped markets, specifically entrepreneurs, small-business people, and professionals. Includes two tailored questionnaires.

Second Century Management System (SCMS)
Tracks pledges, donor designations, billings, and cash receipts for both individuals and organizations. Developed for use with IBM System 36.

In addition to the above, United Way of America's environmental analysis database, *Soundings*™, is also available via the Human Care Network. Composed of abstracts of articles from a variety of publications, *Soundings* covers topics that may affect how a United Way does business. The five broad subject areas included are: social, economic, political, technological, and philanthropic. For additional information on accessing *Soundings*, contact United Way of America's Information Services and Technology Division.

APPENDIX D
SELECTED BIBLIOGRAPHY

Periodicals

Across the Board
American Demographics
Business Week
Christian Science Monitor
Fortune
Future Survey
John Naisbitt's TrendLetter
New York Times
The Numbers News
State Legislatures
TIME
U.S. News & World Report
USA Today
Vital Speeches of the Day
Wall Street Journal
Washington Post
Washington Times
What's Next

Books/Reports

American Council of Life Insurance. *The New Pluralism.* Washington, D.C.: American Council of Life Insurance, 1984.

American Society for Personnel Administration. *Work in the 21st Century.* Alexandria, Va.: American Society for Personnel Administration, 1984.

Birch, David. *Job Creation in America.* New York: Free Press, 1987.

Cetron, Marvin J., and Marcia Appel. *Jobs of the Future.* New York: McGraw-Hill, 1984.

Darrow, R. Morton. *The State of Families 2: Work and Family.* Milwaukee: Family Service America, 1987.

Didsbury, Howard F., ed. *The World of Work—Careers and the Future.* Bethesda, Md.: World Future Society, 1983.

Halal, William. *The New Capitalism.* New York: John Wiley & Sons, 1986.

Hallet, Jeffrey. *Worklife Visions.* Alexandria, Va.: American Society for Personnel Administration, 1987.

Harris, Louis. *Inside America.* New York: Random House, 1987.

Hudson Institute. *Work Force 2000—Work and Workers for the 21st Century.* Indianapolis: Hudson Institute, 1987.

Institute for Alternative Futures. *The Future of Work and Health.* Dover, Mass.: Auburn House, 1986.

Naisbitt, John, and Patricia Aburdene. *Reinventing the Corporation.* New York: Warner, 1985.

National Alliance of Business. *Employment Policies: Looking to the Year 2000.* Washington, D.C.: National Alliance of Business, 1986.

Oxford Analytica. *America in Perspective—Major Trends in the United States Through the 1990s.* Boston: Houghton Mifflin, 1986.

The Roper Organization. *The American Dream.* New York: The Roper Organization, 1987.

Schwartz, Gail Garfield, and William Neikirk. *The Work Revolution.* New York: Rawson Associates, 1983.

Strumpf, Lori, for the Center for Remediation Design. *Basic Skills and Employment and Training Programs: Can the Combination Benefit Employers, Youth and Community Institutions?* Washington, D.C.: National Commission for Employment Policy, 1987.

United Way of America. *What Lies Ahead: Looking Toward the '90s*. Alexandria, Va.: United Way of America, 1987.

U.S. Department of Labor. "Projections 2000." *Monthly Labor Review*. Washington, D.C.: Bureau of Labor Statistics, 1987.

Zuboff, Shoshana. *In the Age of the Smart Machine: The Future of Work and Power*. New York: Basic Books, 1988.